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ABSTRACT

This document records the oral testimony and written reports of witnesses who testified at a Congressional hearing on education for entry-level workers who are needed by small businesses. Those who offered oral or written testimony included representatives of the following: National Alliance of Business, the American Society for Training and Development, the Educational Testing Service, the Council on Competitiveness, and the Executive Secretarial School. The testimony centered on the theme that noncollege-bound students, who represent about 75 percent of students, do not have the basic skills needed to fill the jobs available and to advance in those jobs. Witnesses suggested that many kinds of reform have been tried with little success. They pointed to Goals 2000, however, as the type of movement that is needed and that might provide the goals necessary for collective work toward a more competitive work force. Some witnesses believe that educational reform cannot be just "tinkering around the edges," but must be a complete overhaul of the school system. Others suggested a "youth apprenticeship" program for the last 2 years of high school, with employers playing a greater role in training students for the jobs available. According to one witness, schools and employers need to agree on validated skills necessary for high school graduates so noncollege-bound students have some incentive to study. In addition, education should stress more applications, according to several witnesses. Some witnesses also stated that small businesses cannot afford training for their employees and that the federal government should provide tax incentives for training personnel, just as they do for technology and equipment purchases. (KC)

CE

ED 372 256

EDUCATING THE SMALL BUSINESS WORK FORCE

HEARING

BEFORE THE

SUBCOMMITTEE ON DEVELOPMENT OF RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT

OF THE

COMMITTEE ON SMALL BUSINESS
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRD CONGRESS

FIRST SESSION

WASHINGTON, DC, SEPTEMBER 21, 1993

Printed for the use of the Committee on Small Business

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EDUCATING THE SMALL BUSINESS WORK FORCE

TUESDAY, SEPTEMBER 21, 1993

House of Representatives,
Subcommittee on Development of Rural
Enterprises, Exports, and the Environment,
Committee on Small Business,
Washington, DC.

The subcommittee met, pursuant to notice, at 2:04 p.m., in room 2359-A, Rayburn House Office Building, Hon. Bill Sarpalius (chairman of the subcommittee) presiding.

Chairman Sarpalius. The Subcommittee on Rural Enterprises, Exports, and the Environment will come to order. I want to welcome all of you here today for this hearing. We should have some Members coming in and out. There are several committee hearings at the same time as this one.

This committee hearing today is one that I have really been looking forward to, and I have read the testimony and really look forward to hearing what our two panels have to say.

A recent report on adult literacy by the U.S. Department of Education found that 90 million adult Americans are functionally illiterate. The same study reported that 50 million adults in this country do not have the skills necessary to use a calculator for basic addition. So we have to ask ourselves these questions:

When our children graduate from high school, will they have mastered the basic skills of reading, writing and arithmetic? Will they have minimum computer skills and will they become productive members of the work force? Of the students that made it through high school, only 20 percent will make it through college.

So what happens to the remaining 80 percent? Do these kids have the skills necessary to get a high-paying job? Can they meet the demands of today's businesses? If we, the public, cannot educate our young people in the skills necessary to become productive members of tomorrow's work force, will we erode this Nation's ability to compete with the high-skill, high-wage workers of the seven industrialized countries and the low-wage, low-skilled workers of Mexico and the Pacific Rim?

America will become a Nation of high-wage, low-skilled workers, and that speaks poorly of our economic and political future.

What are the costs to society? Each year 700,000 young people drop out of high school without the skills necessary to find and hold a decent job. Roughly 66 percent of all prison inmates have not graduated from high school. Even worse, experts estimate that only 12 percent of all welfare recipients have a high school diploma. Too many people in this country lack the skills necessary to become productive members of the work force.

Furthermore, the only jobs available to undereducated Americans are low-skilled jobs. These kinds of jobs are shrinking in number as the U.S. workplace becomes increasingly more complex.

According to a 1987 Hudson Institute report, only 27 percent of all future jobs will fall into low-skilled categories, compared to 40 percent of jobs today.

Education and training are critical for today's workplace. Business has been the first to recognize the problems of a poorly educated work force. Perhaps they noticed it when they tried to change work processes or they noticed it through the work habits, but they have noticed, and they are here today to warn us.

There has been a lot of talk lately about the cost to businesses from various regulations, laws and mandates, but little discussion over the cost to businesses of a poorly educated work force. Companies large and small must invest time and money to teach workers the basic skills to run complex machinery. Already U.S. employers spend about $30 billion a year on formal worker training. But that money only reaches about 7 percent of the work force and less than 1 percent of U.S. businesses.

Just as knives make it easier to cut and slice, education makes it easier to solve problems and to find new solutions.

An educated work force is a dynamic and skilled work force, a work force that can make businesses competitive in any country in the world. In fact, a well-educated, dynamic work force is critical for America's economic survival.

This is a hearing about survival, the survival of America's economic lead and our way of life. Today we will ask what needs to be done to improve the overall quality of America's educational system. While knowledge, in and of itself, is a wonderful thing, education has a practical application. This subcommittee is concerned about the practical application.

Education is a tool. It is a means to an end. Unfortunately, education in America has become a means to a diploma, not a means toward a job. The time has come to prepare students for the realities of the work force. Like a rising tide, if we raise the education and skills of American adults, we will increase our Nation's competitiveness.

I am honored to have with us today the Ranking Republican Member, Congressman Hefley.

Would you like to make any remarks?

Mr. **Hefley**. Thank you, again, Mr. Chairman, for addressing another issue that directly impacts small businesses and the American people.

We spend more money per capita on education in this country than any other nation on the face of the Earth, except one; and somehow we are still not justly proud of the education system in this country. Parents and taxpayers across the country are fighting to systematically reform our schools, and these reforms go right to the core of how we provide education to our children.

I think this group that we have before us can be an enormous help as we seek these reforms; but if systematic reform is called for, it doesn't pay to tinker around the edges. Frankly, as I have looked at testimony that will be given here today, it appears that some of the testimony is this, tinkering around the edges.

In my lifetime, I can't begin to count all the reforms that have been implemented to improve our public school systems in this country. More money: That seems to be the answer always. We need more money; if we had more money, we would have better schools and educational systems.

As I said, we are spending more than any other nation on it. More diversity, longer days, shorter hours, Head Start, Second Chance, new math, old math, conflict resolution, and values clarification, apparently they have been less than successful. We find ourselves still in a mess where we are not proud of the system.

Meanwhile, America's parents seem to be voting with their feet on the educational system. We see them leaving the public school systems in droves. It appears that the real advances in education today are coming about in the private and home school systems, not in the public schools.

I think it is illustrative that America's President, a man who expresses more confidence in Government than practically anybody I know, chose to put his daughter in a private school system. I don't blame him for that. Living where he does, I would have done the same thing; but at the same time it raises real questions.

We need real reform, not just tinkering; and I hope that the business groups represented here today are prepared to fight for those reforms. Otherwise, we are condemning another generation of children to a system that has proven to be mediocre at best.

Thank you again, Mr. Chairman, for holding these hearings, and I look forward to the testimony.

Chairman **Sarpalius**. Thank you.

[Mr. Hefley's statement may be found in the appendix.]

Chairman **Sarpalius**. We have Congressman Manzullo from Illinois.

Mr. **Manzullo**. Thank you.

I express my appreciation for your coming. I want to apologize in advance that I have to leave in 20 minutes to go to another event, but I can assure you that I will read your testimony.

Chairman **Sarpalius**. Thank you.

On our first panel we have Mr. William Kolberg, president of the National Alliance of Business; Mr. Tony Carnevale, chief economist of The American Society for Training and Development; Mr. George Elford, director of Washington, DC's Educational Testing Service; and Mr. Howard Samuel, senior fellow, Council on Competitiveness.

In addition, we have Mr. Stephen Friedheim, president of the Executive Secretarial School; who will be testifying on this first panel as well.

Chairman **Sarpalius**. Mr. Kolberg.

TESTIMONY OF WILLIAM H. KOLBERG, PRESIDENT, NATIONAL ALLIANCE OF BUSINESS

Mr. KOLBERG. Mr. Chairman, I appreciate the opportunity very much to appear before this committee. I will try to summarize my testimony within the 5 minutes that you typically allot.

Mr. Chairman, you and Mr. Hefley, it seems, start at the right place and that is talking about the serious problem. Most of our members, most of the members of every business organization in the United States are small business.

No matter how many times we ask them and no matter how we put the question, the answer keeps coming back, the educational system in the United States, and therefore their entry level work force and current work force, is inadequate to do the jobs we need to do. I could go on in that vein, but I doubt if the committee needs to have any more testimony from us on how serious this problem is.

You didn't talk about the international comparisons, but the United States ranks last in science and math in international competitions—and carefully done computations, by the way. Then, clearly, what more do we need to know?

We have a serious problem, and the problem is not just within the schools today. The problem is in the work force of today. You start off by saying that 90 million, half of the adults, are functionally illiterate. They cannot read beyond the seventh grade and compute beyond the fifth grade. In the modern company that can't cut it.

They can't read manuals. They can't apply what they read. They can't take instructions the way they need to.

Yes, Mr. Chairman, we in business certainly do have a serious problem that needs to be acted on.

The second point I want to spend a minute on is what Mr. Hefley was talking about: Are we really serious about trying to get some changes done? I hope we are and I believe we are. There are 11 national business organizations in this city that have combined to form the Business Coalition for Education Reform. We all do very different things, whether it is the U.S. Chamber or the National Association of Manufacturers or the National Alliance of Business or the Business Roundtable, but we are together on the following things:

We believe that national education reform, first of all, has to start out with goals. We now have a set of goals, prescribed to by both parties, started by President Bush and certainly Governor Clinton when he was a part of that summit. Those six goals are about to be enacted into national law in the Goals 2000: Educate America Act, which is before this body to be acted upon shortly.

Second—and here, Mr. Hefley, this seems to us in business to be the key; not only do you have to have goals, but you have to set standards on what our kids need to know and need to be able to do. Those standards need to be set by States and driven down to the communities: Here is what we want to accomplish—what are the standards for math proficiency, for science proficiency, for reading proficiency—and be sure that in all 50 States those standards are set very high.

Backing up those standards are a new way of assessing kids, not just multiple choice or true and false, but a new way of deciding, are our kids meeting those standards? Again this is not the Federal Government doing this. This is the Federal Government through a leadership process getting States and local school districts to engage in this kind of thing.

It is going to mean changing our curriculum and retraining our teaching force; it is going to mean radical reform in our education system all the way from top to bottom for all 43 million kids and for all 2.5 million teachers. Now, this is a monumental job.

Yes, Mr. Hefley, we have tried almost everything one could think of at one time or another without having a total strategy. I believe that this administration, with Goals 2000, following on with the Elementary and Secondary Act has—through a national strategy that governors are comfortable with, that more and more education people are comfortable with—is beginning to embark on a national strategy that over the next generation could carry us to where we need to go in education.

Let me go on and talk for a moment about the 75 percent of our kids that don't go on to college and don't need to go on to college, the frontline workers of the United States. I passed around for those of you who are interested up there an insert we put in Fortune magazine that talks about youth apprenticeship. We in business believe strongly that it is time for business to hook up with the schools in developing curricula so that for those noncollege-bound kids, they go to school until they are in probably the 11th grade, and then business begins gradually but surely to pick up the responsibility for on-the-job training.

We call it "youth apprenticeship." It is work-based learning after the tenth grade. The curriculum is decided on by the school, and most importantly, by the employers. Employers essentially finish off, if you will, the education of our noncollege-bound young people in acquiring the skills on the job that that employer needs.

Now, this has only just begun. Again, there is a piece of legislation before this body, presented by the administration, to begin that. I just came today from a conference we have been holding on youth apprenticeship with employers. It is a very new concept.

We have tried a lot of different things over time. We have had vocational education, career education, vo-tech and a variety of other things. It is time for us in the employer community now to essentially stand up and say, we need to develop a solid school-to-work system that works for the noncollege-bound kids. It is a part of school reform.

When we talk to employers and we take surveys, 80 percent of the small employers in our membership say they are ready to engage in something like youth apprenticeship, but small employers are going to have a tough time affording the up-front costs of doing that. They realize that to get the workers they need, they are going to have to engage themselves very closely with the schools in your community and mine in order to finish off the education in the way that employers understand. What a worker needs as they come from school are not just the formal skills, but a work ethic and an understanding of how to work.

To conclude, Mr. Chairman, I am happy to see that the Small Business Committee is getting involved in this sort of thing, because education reform, as I think you said very well in the beginning, affects a huge investment, it is $250 billion a year. It covers all of our kids, and there are 43 million kids in our public schools today. It is an industry that badly needs to be reformed from top to bottom for work force reasons.

We in business are much more engaged, more seriously engaged, than we have ever been before, and we are engaged for the long pull. Our members say that the most important thing we are now doing in the National Alliance of Business is to work on work force quality problems, starting off with our public schools.

So we are engaged in a very different way than we have ever been in the past, much more deeply and much more thoughtfully, and we look forward to working with this committee and this subcommittee in the future as we try to figure out this very, very tough thing: What is a strategy that is going to work that is going to make us world class?

Thank you.

Chairman **Sarpalius**. Thank you.

[Mr. Kolberg's statement may be found in the appendix.]

Chairman **Sarpalius**. Mr. Carnevale?

TESTIMONY OF ANTHONY P. CARNEVALE, CHIEF ECONOMIST, AMERICAN SOCIETY FOR TRAINING AND DEVELOPMENT

Mr. **Carnevale**. Let me summarize my statement and submit the full text of my remarks.

We have talked for a long time about what is wrong with American schools, including their inability to meet the new skill needs of American employers. Those points have been made so many times, they don't need to be made again. It's time to talk about some of the solutions.

Bill began with the solutions in place; I think they make a good deal of sense. We have as a Nation in a very bipartisan way, and with virtual unanimity among us, already agreed to set education goals. We have since moved from goals to the notion of education standards, the setting of national education standards.

I would argue that in that process, which is in legislation before you in the Congress at the moment, we need to be very careful that we set national standards, but do not end up standardizing American education. That would be a mistake. We need to have a standards process, and a set of standards that allows individual States and communities to meet the standards in their own way. If we don't in some way free up the energy and the commitment of American parents and students and teachers and political leaders out there beyond the beltway in some sort of a standard-setting process, I fear that what we will get is ritual responses to a set of national standards.

We need to build a process that energizes American communities, including the education community, in the standards-setting structure that we do finally arrive at—one that I would add is largely still up for grabs in the current proposed legislation.

I am one who cannot find it in my heart to believe that American parents or teachers would set low standards for American students. None of us would do that for our own children, and I think we can trust our local communities and schools, as well as our State leadership to set high standards, so long as they in some way or other dovetail with a set of national standards as well.

My second point is that—again, to build on something Bill said, and that is to some extent what we are talking about here when we talk about improving American schools is improving the education possibilities for noncollege youth.

As a Nation, I would argue that we still produce the best white collar and technical elites in the world, that our college-educated population is without peer in terms of its economic performance and performance in the community and in the political system as well.

Our difficulty at the moment is the noncollege population. The reason we face difficulty there is that the requirements in workplaces have changed substantially for nonsupervisory workers. In the old days when the standard we had to meet to compete effectively was the ability to produce high volumes of products at low prices, what we built were institutions that dumbed down work at the interface with the customer, work systems that utilized rigid technology and relatively unskilled labor.

Now, if we are going to provide quality and variety and customization and customer service and speedy innovation, institutions are called upon more and more to use flexible technology and much more highly skilled workers in the process of making goods and delivering services and interacting with customers. So, the workers down the line need to be both more empowered with additional autonomy, so they can perform their functions and exploit the technologies we give them, and enabled with more skill—that being more education, mainly, as well as skill on the job.

So the improvements we need to make, both in our workplaces and in our schools, are improvements that focus on increasing the capabilities of noncollege youth, the other half of the graduating class from high school, the other two-thirds that doesn't graduate from college, and the nonsupervisory worker. It is reform in building an education system that serves their needs that is most important.

Then, again, to build on one of Bill's other points, the system that we seemed to have arrived at for creating better educational systems and opportunity for noncollege youth is something that is variously called "apprenticeship," or "school-to-work transition." It is in the final analysis, most agree, an education structure and a pedagogy that is more applied, that mixes education and learning on the job to the extent possible; a system that requires a very substantial employer involvement if it is going to work, for a variety of reasons.

One, if we are serious about engaging young people who are not going on to college in their schooling, if we are serious about giving them incentives to learn, we are going to have to in some way or another leverage their study by connections performance in school to employment possibilities. As it stands now in any high school in

America, if you are not going on to college, you don't have much incentive to study. Even if you are, in many cases you don't.

I can recall in my grade school and high school days when they handed me those classic novels that I was supposed to read, and I got through the first three pages of the classic comic book that I substituted for the novel. I wondered why they wanted me to read it, and the response was, you have to have it for college. So I did the best I could.

If you are not going to college, there is not much reason to study. Your performance at school will have little to do with your job projects. You will graduate at 18, and you will get your first job that you hold for more than 3 years at age 28. So the hiatus is enormous. Hiring is not based on your performance in school. It is based on whether or not you have a high school degree and your work history. So, until we can make some kind of a linkage between employers and schools, in the hiring process, there won't be much incentive for students to learn.

The obvious comparison in all these conversations about school-to-work transitions is, as always, the Japanese. In Japan, teachers present students to companies to be hired. Among these are students who are not going on to college. Eighty percent of the time the companies accept the teachers' recommendations based on both performance—on test scores and academic performance and comportment in the schools.

We have no such set of relationships in America. In order to build them, we need to create schooling that employers have some faith in. They might then want to hire earlier and accept the judgments of teachers and accept school standards. We need a set of standards that are agreed to by employers that will make that hiring based on a sense, on the part of the employer, that there is some validity in the schooling that occurred.

Another point I want to make before closing, is that much of what we know about pedagogy—that is, the way we teach nowadays—tends to validate our belief that we need to build some kind of applied learning system; that is, most of the findings these days in the cognitive sciences tell us over and over again that learning in school—traditional academic learning—is not very effective for anybody, college or noncollege students; that more applied kinds of curriculums are more effective. In fact, even among college graduates, what you have learned in school does not transfer very well to real applications in the real world, whether it is a lawyer or a doctor or an economist. Academic learning is rarely transferable into work formats, and we have a fair amount of data and study that demonstrates that now.

American students oftentimes know a great deal. If you give them an equation or a number and ask them to divide by another, they can do that. If you ask them to multiply or subtract or divide, they can do that. But if you give them a problem to solve, they don't know how to solve it. They don't know whether to add, subtract, multiply, or divide in order to solve the problem. American students know a great deal, but they don't understand what they know; and that is what is showing up in all the tests, including the one that was reported on by the Department of Education a few days ago.

So the movement toward an applied curriculum works best for college students, gives them access to employment and leverages them as they learn; and it is the most effective way to teach anyway.

One final point, and that is in the building of this applied curriculum there is one common criticism of the administration's bill and in the general conversation about school-to-work and apprenticeship. The common critique of the legislation is that it is validating tracking in the American system. People are saying to some extent what we are doing here is building one academic track that works for college students and advantaged Americans and now we are going to build a second track that is largely vocational for kids who can't go to college, and thereby foreclose opportunities for those students.

So the system that we need to build needs to avoid tracking. It needs to be one in which there is an open-ended possibility for both work and further learning at all times, a system of continuous pathways such that any student at any level of achievement or skill level can enter the system. When they exit the system, wherever they do—at high school graduation, for instance—they have learned enough so they can get a job if they need to. They have also learned enough so they can continue their education if they want to—not necessarily to go on to college, but perhaps to a 2-year school after high school.

When they graduate from the 2-year school, they need to meet standards that will assure that they can either go to work, or if they want to, continue their education. There always needs to be another school door to go through that keeps the possibility of a 4-year college degree open for all Americans. Whether 25 or 30 percent of us make it, as is currently the general rate of completion in 4-year schools, and whether we change that or not is beside the point. The opportunity needs to be there and can't be foreclosed for any kid in school.

So the system needs to be a continuous and open-ended process that does not foreclose a 4-year college degree where credits and skills are transferable both into workplaces and into jobs, where exit and entry into the system is very carefully posted by skills standards that students are asked to meet, skill standards that employers find valid and that the next level of schools also finds valid for admission.

Thank you.

[Mr. Carnevale's statement may be found in the appendix.]

Chairman SARPALIUS. Mr. Elford.

TESTIMONY OF GEORGE ELFORD, DIRECTOR, EDUCATIONAL TESTING SERVICE [ETS]

Mr. ELFORD. Working with the Educational Testing Service, we are involved with many of the data collection efforts that are referred to, and I will be referring to some of those in my testimony.

The most recent adult literacy study was done by ETS for the Education Department. We do the national assessment and the international assessment of educational progress, along with the SAT and other things. I was asked to answer a number of questions; and I will touch on them briefly, but also tie in with the previous remarks.

In regard to, does the American educational system adequately prepare students for today's work force, I think we have to deal with the point that Tony raised about today's work force and tomorrow's work force. I think there are studies, that say there is no skill shortage today, with the way the work is organized. But if we organized work the way Tony referred to with high-performance workplaces, we would have a skill shortage.

It is a debate as to whether it is today's shortage or tomorrow's shortage. It is not an important debate. We have to get on with it no matter what.

Another thing that comes up in the studies on the skills shortage is the definition of "skills." If you look at the SCANS survey and America's Choice on what employers are looking for, by "skills," they mean some academic skills but they also mean honesty, integrity, punctuality, work orientation—traits that are not referred to as "skills" in the academic world. The skill question is mixed with academic skills which are important and other skills which are learned in a number of settings, including schools.

We have done some work with national assessment of educational progress, and I have included some charts. In reading and math, American schools are about the same level now as they were 20 years ago. There has been some slight decline in science and some in social studies. That is one snapshot.

Another snapshot is recent comparisons that are new to our experience in the international arena. They show that the United States finishes far back in the field in comparison with other countries. In the 1992 math international assessment, age 13, we fell just above Jordan and below Spain. The two top countries were Korea and Taiwan.

We referred to the recent literacy studies that showed that almost half of this country is at level 1 or level 2, which are fairly low levels of functioning. The same study showed that most of the people—60 to 75 percent in the lowest level and 92 to 97 percent in the second lowest level—describe themselves as being able to read and write English well or very well.

We saw the same thing in the math picture, that American parents and students are fairly happy about their math skills. The Koreans are very disappointed in their math skills, except they are way above us.

So we have a level of satisfaction in this country that kind of makes a lot of people feel that the skill shortage is somewhere else. A lot of it refers to what Tony described as a dumbing down of American jobs that. Many times, the workplace bypasses the skills problems and doesn't confront them because they have reorganized the job.

For example, the average scores for people who report working in professional, managerial, or technical positions were in the middle of level 3 on the five-level literacy scale. For crafts and services, sales and clerical were also at level 3 or lower; and then laborers and assemblers and farmers and service people were at level 2 on average. High school students presently in the school were mostly in levels 2 and 3.

So in terms of what people are showing in the workplace and what skills students presently in high school are showing, there is not a dramatic disparity, but that is the focus on today's workplace and not looking at tomorrow's.

I agree that America's Choice and other documents have pointed out, which we all agreed on, that the focus in the school improvement which must take place has to be on the presently—what we call the "noncollege-bound" or sometimes referred to as the "employment-bound"—and I think it is important to keep the focus there and not try to reform the whole educational system.

We have excellent standards at the upper end in American schools. The advanced placement program by the College Board and ETS is becoming more and more accepted as the standard coin of the realm, a very high standard for high school students to aspire to. This covers about 16 subject fields from physics to art to psychology to economics. There is a wide array of courses with national exams that represent the high-end academic standards for American schools.

I was working over the weekend with a project—when they wanted to break the mold in schools. They were trying to set the national standards; I said we already have them for that school group, 15 to 20 percent of the population. The focus has to be on the middle cohort of students who are not the focused college bound; they are not sure whether they are college bound or not. Most of them will not be, but that is where the focus needs to be.

If you recall the Department of Defense commercials where they showed the kids sitting around and saying, "What are you going to do?" They say, "Army, Navy, Air Force, or Marines; it is a great place to start," because the Department of Defense figured out that is a big talent field and they are sitting there, not knowing what to do, so let's recruit them. It is working, and we saw that in the Persian Gulf. So that is where the focus has to be.

One of your questions asked about vocational education—does vocational education adequately prepare American students? My answer is based on some studies that we have done is that vocational educational doesn't reach American students. Vocational education reaches only 10 percent of the high school students, and vocational educators themselves will admit that vocational education has a prestige deficiency; it just is not popular. It is not going to serve the mainstream for the reasons Tony mentioned because it is seen as closing off the American dream. So the main problem with vocational education is not with vocational education but with the image of vocational education.

The leadership in vocational education has produced what I believe from my long years in education to be a remarkable development, the development of applied academics. What vocational education needs is not more job-specific training, but a broad base in technical literacy, applied physics, applied math, applied science, and applied communications skills. These are excellent new developments created by the vocational people.

But the problem is, they are inhibited from moving into the mainstream because they are coming from the vocational system and they are suffering that persistent prestige problem.

How to improve the United States school-to-work transition system? The first way to do it is to work on the curriculum that Tony was outlining here, the new curriculum for that middle group that is open to all directions. I think that if there is any one slogan that should be on the wall—in the Clinton campaign, there was the slogan on the wall, "It's the economy, stupid." Well, I think the slogan should be, "It's the curriculum, stupid." We have to give those kids something on their plate that is worth having, and right now they don't have it.

The second part of the problem is that they need a recognition system. They need a way to have someone paying attention to what they do. I talked to the staff before the hearing and they encouraged me to mention the program we are working on with the Principals' Association. That is a program to build a school-to-work record that is tailored to the interests and needs of business.

One of the reasons why nobody pays much attention to what students do in school is that business has no ready access to the kinds of information schools could give them, but really are not presently organized to do so.

So we have been working with the Principals' Association and are now promoting a program; I show in the testimony a sample record of what we call WORKLINK, which is a school-to-work record system that focuses on things that employers are interested in.

One of the things, for example, is teacher ratings of student work habits. These are the kinds of skills—attendance, punctuality, work completion, and teamwork—the kinds of skills that schools observe all the time that employers are routinely interested in but nobody is recording. These are the skills employers are looking for if employers were to come to trust this information we might overcome this hiatus, between regional and good jobs. Employers don't want to hire students out of high school at present because they don't have any work record.

We are trying to allow students to develop a work record while in school. Skills assessments and grades and other things are included in the record.

Small business has a great potential in becoming involved with this kind of school-to-work record system. By what they ask for from the record data base, they will be giving messages to schools on what is important practical messages, because that is what they are searching for; and they can use their search criteria with the data because of this WORKLINK system and tell the schools, I am looking for students that have these kinds of skills, this kind of background, some experience here or there. That is a direct way for employers—small businesses, especially, who hire most of the kids out of high school—to directly influence the curriculum while they are getting better information themselves. That is an important way for small businesses to help improve education.

I think this is a possibility that enables employers to immediately impact schools, and at the same time, immediately help students and motivate students.

One of the things that we mentioned, the students in this noncollege-bound group have no organizing force in their high school education. The college-bound students know exactly what they need to do. They know exactly the kind of record they need to build. What we are trying to do is create the same opportunity for these other kids, including the college-bound kids, that enables them to focus on what they need to do. They need to build a record here; that changes the dynamic.

The last question I was asked—I will skip to that now as a matter of time; it is an assessment question: Are standardized test scores an appropriate measure of America's educational performance?

The answer is yes. If we change the words "test scores" to "standardized assessments," then the answer is an even more emphatic yes.

Standardization is the key to any kind of useful assessment. I will give an example, while watching the football season and you see the officials on the football field. They are trying to maintain standard conditions of play; they are there for standardization. Standardization means that people are doing the same task under the same conditions. That task can be done in many different ways. I will give some examples of different standardized assessments.

For example, we have computer-adapted testing where a student sits down at a computer and begins to take a test, and the computer continually adapts the test to the student's performance. So the student gets an accurate score in about a third of the time at a high level of reliability without the frustration of seeing things that are too hard, way too hard, or the boredom of seeing things that are way too easy because the computer is continually matching to their performance level. That is a standardized assessment.

We have the advanced placement tests, as I mentioned before, fairly much the standard of the realm in the high-end academic scene. It includes a constructed response, or studio art, or portfolio, that allows the assessment to handle different questions, actually work problems.

Then we have scaled performance exercises, which are included in the testimony here, which we used in the National Adult Literacy Study. Where we have scaled exercises, we ask people to do these exercises that are scaled by difficulty in field testing, and then we can describe them on the skill scale by which exercises they can do and which ones they have difficulty with.

Then we have computer-based testing where the actual test itself is done on computer. We have some programs that test WordPerfect, Lotus and other kinds of immediate computer-based skills. We don't ask questions, but we let people demonstrate in controlled conditions their skills.

So, I think—I am trying to figure out why the question was asked. I think there is great interest now in portfolios. We have been using portfolios at ETS for years in certain specialized fields. Portfolios make sense when we have graphic material, art, and visual art. If you are trying to evaluate someone as an oil painter, you can't give them a test; you have to see their work. But there has been a move to make portfolios an all-embracing assessment, and that is not feasible because the problems of standardization are overwhelming.

For example, when a student has a portfolio, who did the portfolio? Was it mother or dad in the workshop?

We have many ways to do standardized assessment that go beyond multiple choice questions, we must, however, stick to standardization if we are going to get useful assessments of our educational problems.

I think that fairly well sums up my remarks, Mr. Chairman.

Chairman SARPALIUS. Thank you.

[Mr. Elford's statement may be found in the appendix.]

Chairman SARPALIUS. Mr. Samuel.

TESTIMONY OF HOWARD D. SAMUEL, SENIOR FELLOW, COUNCIL ON COMPETITIVENESS

Mr. SAMUEL. Mr. Chairman, I will try to get close to your 5-minute suggestion.

I represent the Council on Competitiveness. It is not a business organization. It represents business, labor and academia. My background is in the labor movement for the last not-quite-40 years.

. We believe, in a report we published recently, which will be available to the committee, that if the Nation is to deal effectively with work force development, it must start at the earliest age, perhaps Head Start at age three, and continue through the worker's life. We did not deal with the issues K-12, which Mr. Elford has discussed, but with issues after, really, the period of early education.

The main point that we wanted to make in our report was that we think that all of the work force issues are inextricably linked. Developing a system of occupational standards, we think, is a foundation of a more effective program to prepare noncollege-bound youth for the world of work.

But in addition to that, we also have to have a program of school-to-work transition if we are to get those kids into the workplace. If we are going to be successful in the long run, we also have to have on-the-job training which continues throughout the worker's life; and if we are going to do that, we have to reconstruct the way our Government deals with dislocated workers in ways far beyond what we have already done.

This question asked was whether small business had special needs which requires special responses as we develop these programs. Small business, by definition, does not have the resources enjoyed by larger firms to overcome the problems of an inadequately prepared work force. So for small business, the need for more effective public programs could be said to be even more critical than for larger firms, which have resources to establish their own programs.

We would hope, therefore, that as this administration and Congress initiate programs such as the one mentioned earlier, the Goals 2000: Educate America Act in respect to the Nation's educational systems—which also includes a provision, of course, for skills standards—and such as the newly introduced School-to-Work Opportunities bill, that small business and organizations representing small business will demonstrate their strong support.

Small business will be proportionately the largest gainer from these bills.

Small business also has a special stake in a joint public-private effort to improve the processes used to provide goods and services in every sector. It has been mentioned about the America's Choice Program, which dealt with the issue of need for skills. I happen to have been a member of that commission. We did, indeed, find that there is, in reality at the present time, no particular skills shortage in the eyes of business.

But what is needed, I think more and more now, and which I think is becoming more and more acceptable as a goal for the future, has been described in various terms: Lean production, high performance production, agile manufacturing. These are important not only to the manufacturing sector, but the service sector which now employs most of the Nation's workers, and the service sector provides an important share of our export income.

Government is already in the earliest stages of providing help to small- and medium-sized businesses through the manufacturing technology centers, administered by the National Institute of Science and Technology. I would hope that small business will also show its support for expansion of this program, also in support of the administration's objectives which can do so much to improve the Nation's productivity and our ability to compete in world markets.

Finally, small business has a special problem in the continued training of workers on the job. Small business often doesn't have the resources to carry out its own training, and even if it does, there is a reluctance to commit them when the workers with needed skills are "poached" by competitors who may find it cheaper to pay more to workers trained by others than to do the training themselves. Such "poaching" is a zero-sum game, of course, but in our democratic society there is nothing much we can do to prevent it.

A number of proposals have been advanced to provide incentives to companies, small business included, to carry out their own ongoing training programs, ranging from instituting a training tax on companies that fail to dedicate some percentage of payroll to training to providing a tax credit to compensate business, in part, for its investment in training. I don't see any consensus on these proposals in the labor or business community or any branch of Government, but the Council on Competitiveness believes that encouraging the private sector to greatly increase investment in training, particularly of frontline workers, is critically important if America is to remain competitive with other industrialized nations and improve its standard of living.

Chairman **Sarpalius**. Thank you.

[Mr. Samuel's statement may be found in the appendix.]

Chairman **Sarpalius**. Mr. Friedheim.

TESTIMONY OF STEPHEN B. FRIEDHEIM, PRESIDENT, EXECUTIVE SECRETARIAL SCHOOL

Mr. **Friedheim**. Thank you. It is a pleasure to be here.

I represent the U.S. Chamber of Commerce where I serve as a member of the advisory committee of the chamber's work force preparation, which is equally concerned, as all of us are, about the quality of our work force and is actively engaged in trying to find suitable recommendations for you.

I am also Chairman of the Board of the Career College Association, which represents over 1,600 individual small businesses that prepare people for entry level jobs in everything from auto mechanics to X-ray technicians. As I sit here today, I notice a television technician behind that camera, and I notice a court reporter here in the room, both of whom come from the kind of skills that our schools prepare.

We are very pleased with our record of preparing people for these careers, which have happened, to a large degree, because of our relationship with the business community; because we have gone to them and asked them what they wanted, and they have become very much a part of the process. I am glad that we haven't waited for national educational reforms to come forward, because if we had, we would have been out of business by now.

We have had to do the job ourselves. What we found is that if we measure institutions based on some clear criteria, we can succeed in our mission. That criteria is centered on outcome measurements that discuss the question about how many students enrolled; of those enrolled, how many graduate; of those who graduate, how many find employment in the area for which they were trained; and if there is a licensure or certification required following graduation, then how many of them succeed in that regard. That is a true measurement of the process.

I think part of our problem [illegible], is that we haven't been clearly focused about what we want our secondary schools to do, and we have asked them to do too much. We have talked about the American dream and we have described it as succeeding in college. Unfortunately, that has come to mean succeeding in a 4-year college degree, and [illegible] a great many Americans who have gone on to a postsecondary program, but we don't call it college, and we should.

We are a degree-granting institution in Dallas. We have an applied associate's degree. We are proud of that, and our students have successfully engaged in a very comprehensive program. As a matter of fact, over 100 students have come from your area, Mr. Chairman, all the way from Amarillo, to train with us, to spend time with us, to become eligible to be qualified office professionals. So we have to be careful about how we use the language that we use to describe what that process is.

I also think we have to be careful about putting proper emphasis on the dignity of work: The realization is that all of us have to go to work and that we should work, and that there is an opportunity for all of us to work in America. That doesn't mean you to have a baccalaureate degree in order to succeed at that. It is important for many jobs, but for a vast majority, they don't have to. Therefore until our secondary programs realize that they have a full population to serve, and until they realize that they are going to be measured on that basis, then they are not likely to step up to the plate and do what is essential. They are also not likely to become engaged with the business community, as many of us have recommended, because they don't see the business community as an alliance but another hindrance, as an interference to their process.

The reality is that the business community would like very much to be a part of the process and are quite willing to do so, but in ways in which they are consistent with their own objectives--by appearing as members of advisory committees, serving as speakers in classrooms, and allowing students to come through their facility to see the actual work that is going on. These are the kinds of things that every business can participate in, large or small, and would be quite willing to do so.

Until we recognize that the American dream is one in which everyone works and everyone has a meaningful occupation and is successful, we are not likely to find our solutions. It was former Commissioner of Education, Dr. John Gardner, who said, "A society that doesn't pay equal attention to both its plumbers and philosophers will find that neither its pipes nor its theories hold water."

Thank you.

Chairman **Sarpalius**. Thank you very much.

[Mr. Friedheim's statement may be found in the appendix.]

Chairman **Sarpalius**. Before I get into questions, let me say that all of you have done a superb job. I think you have hit the heart of many of the problems that we are facing in education. I would like to share with you gentlemen some personal experiences.

I grew up at a place called Cal Farley's Boys' Ranch. My dad left when I was 10, and my mother couldn't keep a job. My two brothers and I went out there, and I was behind in school. But Cal Farley—when he started Boys' Ranch, nearly all the kids who came there were kids who were behind in school or, probably, chances of them going on and finishing college was slim. These kids had things stacked against them. He had the wisdom to set up a broad vocational program, 13 different skills a kid could learn from cooking to laying brick to being an electrician, driving heavy equipment, working in the hospital, and many other areas. When I graduated from high school, you didn't know who got a vocational certificate or who got a high school diploma; they were treated equally.

As I look back on those kids I graduated with, the kids that graduated with vocational certificates many of them have become very, very successful. One particular student I can recall who was very, very far behind in school today owns a company in Florida, pouring concrete slabs, and is very, very successful.

Another kid I graduated with, who did not get a high school diploma, owns a business in California framing apartment buildings—came back and hired the high school principal to help him run his business.

Another guy I graduated with, who didn't have a high school diploma, owns 13 Pizza Huts in Fort Worth.

I thought that the type of program that he put together—in my opinion, was far beyond his time.

Why couldn't we do something within our programs today, within our public school systems?

I recall, back when I was trying to decide what I wanted to become, I wanted to be a teacher, but I was too embarrassed to go ask my teacher how much money they make. I found it interesting that within our public school systems, we have no courses that teach kids about jobs, about what is available for them. How much does a carpenter make? How much does a guy that owns a Pizza Hut make? How much does a dentist make or a teacher or whatever?

We have very little training within our public school systems for teaching responsibility, showing up at work on time, dressing properly. You mentioned public speaking—speaking and presenting yourself well in whatever profession that you are in.

There is no question—every one of you hit on where our problems are. Our problem here is that from a Federal level, we give a lot of discretion to States in trying to improve their quality of education.

Some of you talked about the need for higher standards. Some of you said we don't need standards. We see States trying to improve their quality of education, gear more toward trying to prepare kids for college, when as I said in the opening remarks, only 20 percent of these kids will finish college.

We hear from businesses today that per polls the Chamber of Commerce did, that their disappointment is that the very basics, the fundamentals of working, such as showing up on time, are not being taught to these people, and it is costing businesses a great deal of money.

I want to ask each one of you a few questions. Mr. Kolberg, let me begin with you.

You talked about the apprenticeship program starting after the 10th grade, and several other countries with programs very similar to this. Can you elaborate a little bit more on what you visualize? If you could design an ideal apprenticeship-type program, what would it look like?

Mr. KOLBERG. Mr. Chairman, I could go on a long time about that, but let me see if I can summarize it. At the conference I mentioned this morning, Governor McKernan from Maine spoke about one of his major employers, Blue Cross and Blue Shield, and described that program. I think what Maine is trying to do is a very fine program.

First of all, it involves employers and schools together, certainly work-based learning as well as academic learning. Young people starting in the 11th grade are picked by their schools and the employers to gradually spend more and more time in the employer's work premises.

Starting in the 11th grade, it is more time in school and not so much on the job, but as they move along, by the 13th grade—and this system is run by technical colleges—by the 13th grade in the technical school you are spending almost all of your time on the employer's premises. It is not odd jobs or stuffing envelopes. This is a very well put together curriculum.

The president of BlueCross/BlueShield says that "In terms of what the young people produce, they certainly earn a heck of a lot more than minimum wage, which is really what we pay them. But what they get in terms of skills are the transferable skills that are good with our corporation as well as with any other employer."

They learn the kinds of things you were talking about, Mr. Chairman. It isn't just the academics, although they certainly learn that. As one of the young people said, "it is the first time I have been treated like an adult." Expectations are very high. Standards are very high. I could go on in that vein.

But to summarize again, it seems to me that what we are saying as a business organization to employers is, apprenticeship means work-based learning, and we have got to get employers to work much more closely with schools to spell out what kids must be able to know and do. Then on the job site itself, with mentors—in other words, the employees themselves—making sure the young person is reaching those goals. That is essentially what the Germans do. I think what we need to do is have employers essentially become an extension of education.

Let me stop there. But it seems to me that there are a variety of models, and it would be a mistake for me or anyone else to says that there is only one way that school-to-work transition can be conducted. But it is somewhat similar to what is done in Western Europe.

Governor McKernan in Maine has just begun. Many more States will begin. My hunch is in Texas it probably has already started. I am going to a similar conference in Oklahoma where Governor Walters has begun the same kind of thing.

My hope would be that over the next 5 to 10 years, great numbers, tens of thousands of employers will get involved in something similar to this so that the noncollege-bound young people really end up their education and work experience on the job, ready to go to work with high skills with an employer that needs them and wants them and has participated in educating them.

Chairman **Sarpalius**. All right. Let me ask you, we had a program—and still have, I guess—a program kind of similar to that through our vocational programs. I don't know if you are familiar with VICA vocational program, but if you had a program like that within our school systems—suppose you had kids that wanted to go into construction work, and it might be that within that community you didn't have that much construction work available. How would you deal with that problem?

Mr. **Kolberg**. Well, I don't know any community that doesn't have some construction work.

Chairman **Sarpalius**. Maybe I picked a poor example.

Mr. **Kolberg**. Certainly Amarillo does and any city of any size does, union or nonunion. If they are union, chances are they already have an apprenticeship program; and whether it is plumbers or carpenters, that is the time-honored way to get skills.

For the nonunion, you get the employers together with the schools and put together the standards.

Again, I won't repeat what I said about the main program. It is work—based and school—based around a very carefully drawn curriculum with standards so that the employer, as well as the schools, can measure how the young person is doing.

Chairman **Sarpalius**. OK, now these standards that you are talking about, are these national standards?

Mr. **Kolberg**. They are voluntary national standards; let's put it that way. When I mentioned standards in my remarks, I was really talking about academic standards.

How much math do fourth graders need to know and be able to do as against what the Japanese and Koreans and others do? That is some kind of standard.

You are talking, I think, about occupational skill standards, the development of standards that would guide educational institutions, as well as employers, on what do you have to know and be able to do to do a certain kind of job in our society.

We don't have those now at all. We have them to some degree in some of the trades, and maybe in some of the industries that have typically been unionized, but by and large we have never done that in this country. They need to be developed so that junior and community colleges can train against those standards so that—if you get a certificate from a junior college such as a manufacturing associate degree—employers can let them know that the young person has been trained this way.

It needs to be portable. They need to be able to go from Maine to California to Texas and say, oh, you were trained that way and you have that certificate; it is certificated. OK, we will take a chance on you because you have been trained to those standards.

That is the value of standards, it seems to me—portability, high standards, be sure they are certifiable and have portability.

Chairman SARPALIUS. Mr. Carnevale, you talked about—in your testimony about standards that the employers would like to see their employees meet. Following on the same line of thought here, give me your opinion on that.

Mr. CARNEVALE. I think in the end there is always a temptation to build top-down systems; that is, to set rules and then enforce them in a hierarchical structure. One of the things that we have learned in American businesses in the last 15 years is that that doesn't work, that the kind of systems that work, we know now, are more decentralized systems that energize the stakeholders in any kind of endeavor—that will, energize the people who are involved.

What you have got to do is get them excited about what is going on, get them involved in the process, whether it is in making a car or setting education standards; get them to take some ownership for what they are doing, whether it is making a car or setting education standards. So any kind of system we build—I guess my bias, which is pretty strong—it has to be owned by the people themselves; that is, especially in the case of standards for workers. Let's start there.

Ideally, if doctors can own standards for their profession, I don't know why plumbers and electricians can't. It seems that where workers are organized and have institutions to speak for them that they can have a say in the process. Industries should also own their own standards. The leaders and the lead firms in the industry will always come forward and be willing to participate in the process, and others will emulate them and benchmark, in the terminology of the business institutions, against standards set by the leaders.

I think one of the difficulties in thinking this way in this city is that we are accustomed to thinking in very Federal formats—that is, that the national government imposes its will on institutions where it has leverage—and in this case, in the case of employing organizations, there is no such leverage, not really.

We can mandate these standards; although that is highly unlikely politically. We can bribe the employers to set and meet standards, but there are too many of them. If we tried that, we would get ritual responses, not real ownership; they will meet the letter and not the spirit of the law.

The only way to set workplace skill is to work with and collaborate with employers and workers I would argue for the same process for the schools. The Federal Government doesn't own the education system, the States do. In the education arena you can't deal the States out. The Federal Government doesn't own education standards. In the final analysis, the States do, the schools do, the parents do, the students do, and when the teacher closes the door in the classroom, the teacher owns the standards. I think in the end we have got to build a process for setting standards that—while it recognizes some set of national goals, that we build a structure that asks the stakeholders in the system, whether it is the employers or the education systems, to step forward and set their own standards.

If you are going to do that, you have to live with a certain amount of ambiguity and chaos. I can't believe that anybody that would take the time to set a standard would set a low standard. Why participate otherwise? I have faith that over time that kind of process would result in performance improvements faster than simply setting a lot of standards in a room in Washington with experts and a variety of other people in leadership positions in various institutions.

Chairman SARPALIUS. You also talked about the need for a system of pathways, which I thought was very cleverly put, because I totally agree with you. God didn't make us all alike. Everybody has different talents and different abilities.

One of you talked about a parent—or a person who is an artist or has art skills. Each one us is different. The problem you have is, how do you identify students' talents and then head them in that pathway?

Elaborate a little bit more about what you envision in that regard.

Mr. CARNEVALE. I think that we are not going to build the kind of system we want any time soon. The issue of tracking is going to come up and it is going to be with us for a time, so we need a vision as to where we are going to go. In the end, the only vision that will work in the American case, that students and parents will accept in the end and want to participate in is a vision that doesn't foreclose the college option.

As one friend of mine says, I don't know what we are going to do, but we had better call it "college." In the end, what we have got to do is build a system of alternative learning pathways a disadvantaged minority youth, for instance in the city of New York with poor basic skills enters the system in the eighth grade. He can't graduate high school until he meets a high school standard.

Perhaps there is an alternative in the second year of high school for him to leave school and participate in the employer-based apprenticeship-type structure. But when he finishes in that system, there needs always to be another door that is opened; that the process of educating young people in the United States should never foreclose the option of getting a 4-year college degree, because that, in the end, is the end-game for everybody, both because we know that college leverages the most earnings among Americans and, second, because it is one of the ways we distinguish among ourselves in terms of whether we are or are not middle-class Americans—that is, the college degree is one of the identifiers in the American social structure.

So I think that we need to have a fairly diverse set of standards and a fairly diverse set of pathways. The Federal Government does have some power here because it pays for a lot of this, especially in the articulation between high schools and 2-year schools and college. Anybody who graduated from high school should be prepared to work or go on to school. Going on to school doesn't mean going on to a 4-year college. It may mean a 2-year school or something else. But when you graduate from a 2-year school, that shouldn't foreclose the option of going on to college.

It sounds simple, building a school system where there is always another school to go to, but there is a fairly rigid set of rules and unsatisfactory relationships between American education institutions such that it is very difficult in many cases to transfer—to turn a 2-year degree into a 4-year degree, for instance, because it is hard to transfer the credits.

The Federal Government, because of its control over student aid, can go a long way in encouraging the articulation between these institutions and encouraging institutions to set standards, so that when people graduate, they can get work or more education. I think that is something that we can do from Washington. In a lot of ways, it is all Federal money. The student aid money in America is Federal, largely.

Chairman **Sarpalius**. Mr. Elford, to go right on with what Mr. Carnevale was talking about, you made the statement, what kids need to do is to focus on where they are and where they want to go. You used the example of college kids, they know they want to go to college and their minds are made up and they are working in that connection.

With no question, we probably have kids that are in high school that are still trying to struggle with what direction are they going to take. It may be that they made up their minds and they don't want to go to college.

Keeping in mind, we are talking about 80 percent of the kids in school, I was fascinated by what you were talking about regarding testing kids through the use of computers. I would like for you to elaborate a little more on this subject.

Mr. **Elford**. Well, I agree entirely with what Tony says about multiple pathways, all of which have some prestige. I have been working with youth apprenticeship programs, and I think that work-based learning is an important thing, but it needs to get reflagged out of vocational education where people are now categorizing it. That is a problem. It needs to be part of a larger curriculum reform which follows multiple pathways. That is not there yet.

Meanwhile, life is flowing on for kids, and they come into school and they have to begin to deal with the realities of what is before them. I think they need to have some way to build a serious record and to start being serious and have somebody paying attention to that, no matter which course they go on. Because a lot of things that employers are looking for are not tied to specific programs.

If a student has a good attendance and work performance record and all of these things, these are important things that will serve the student well, no matter what turn they take. So I think there are ways in the interim, starting now, to give these kids some advantages and some breaks and some of the kinds of counseling and guidance services that the college-bound kids have had for years, while these other pathway programs begin to be developed, which would include work-based learning, but they are not there now.

Right now—there was a survey done by the Department of Education a couple of years ago that 60 percent of the students in eighth grade plan to go to 4-year colleges; 30 percent of the students in the eighth grade plan to take a college prep program. What are those other 30 percent going to do? That is half of them. That is the problem.

We have this kind of a gap and a neglected group that needs help getting organized now, and they need a better curriculum. They need something that is high prestige, rich in content. I think applied academics is the core of it, that would allow them to go to Georgia Tech, Harvard, or Indiana or wherever they want to go, or go into the workplace or into the Army or tech prep programs for better employment.

I think there has to be that kind of a program, and it is not getting that much attention. A lot of people are thinking about it, but this is not on the table now, unfortunately.

Chairman SARPALIUS. You talked about—and I totally agree that the image that vocational education has is very, very poor. When I was in the State senate, I took on a gentleman who wanted to totally destroy vocational education—and I am a big supporter of vocational training—and that happened to be Ross Perot. Fortunately we won that battle.

But, you are absolutely right, the image that it has is poor. It is probably looked upon by students, that if you go the vocational education route, you are not as ambitious or as smart or as aggressive as the person who is going to college.

That is why I used the example about Cal Farley; with his kids walking across the stage. They were all treated equally. That was the image in that particular school, that any direction that particular kid decided to go, he was treated with respect no matter which way he went.

I am curious as to whether one of our weaknesses may be within our counseling system. What could we do to improve in that area?

Mr. ELFORD. As I mentioned, it is the curriculum. There has to be a different middle curriculum that is rich in content and that is valued by business, valued by colleges, valued by the military, and valued by a lot of the end users.

Chairman SARPALIUS. OK. Let me go from there.

Mr. ELFORD. That is not there. The vocational education people understand that and they are trying to move there, but they are held back by the image problem. They have figured it out, but they can't move it.

Chairman **Sarpalius**. If you wanted this curriculum, is it the responsibility of the Federal Government to set that out? Is it the responsibility of the States?

Mr. **Elford**. I think, immediately, the States. I think the Federal Government can be an instigator and a prod and an educator of the States. I think the Federal Government can influence it greatly and expedite it.

Chairman **Sarpalius**. How?

Mr. **Elford**. Well, I think by creating some national vehicles of attention for this kind of curriculum redesign—for looking at recognition systems, for example; for getting business, small business and large business, to sit down with the other users, the colleges, the military and so on, and say, all right let's commit to designing and building this major change. I think that is the American answer to what the Germans have done through apprenticeship.

I don't think we can imitate the Germans; I think we can find an American answer. I think the Federal Government can provide the leadership for an American answer. Work-based learning is part of that answer, but it isn't the whole answer. We are looking at a part and not looking at the whole, and that is holding us back at the Federal level.

I think the Federal attention needs to be redirected to the whole area of school-to-work transition and not define it as what ends up in the vocational education category.

It is very difficult, Mr. Chairman, because the world is divided into two categories, academic, and vocational education. We need a middle category. There is no bureaucracy, there is no establishment; there is nobody assigned to work on that middle group A, and 50 percent of the American students fall in the chasm between these two groups.

Chairman **Sarpalius**. OK. Put yourself in my shoes—or boots, I don't wear shoes. But put yourself in our position. Here we are in the Federal Government. I think we all identified what the problem is and what needs to be done. But we leave that discretion up to the States to do that.

Many States are doing education reform and are beginning to move some in that direction. We still have the image problem which all of you have talked about. But how do we get from here to there? How do we do it? How do we make those changes without mandating States to do it, which is something I don't think we need to be doing. But how do we get from here to here on a Federal level?

Mr. **Elford**. Well, I think, what the Federal Government has focused itself on largely, and defined school-to-work transition in terms of work-based learning, and I think that has been a mistake. I think that is part of the picture, but that is a small part in terms of larger whole.

I think if the Federal Government, in its legislation and so on, would call for support through grants and other things, State-based efforts and coalitions of States—it is not one State's problem. The applied academics, for example, developed by vocational education was a consortia of 48 States; they put their money together and built a curriculum. But the problem is they can't get it into the mainstream.

I think those people have provided leadership, but they are thwarted, they are frustrated because they can't—they are under the wrong flag. I think that is a good model, of creating consortia of States with Federal incentives to design a new curriculum. Most of the States have recognized that the general education curriculum, which is the junk in the middle between academic and vocational, is junk and they have to get rid it; but they have not worked out an attractive, marketable alternative.

I think the alternative has to be marketed, because high school students make choices. In grade school, it is assigned, but in high school have you to sell the program. We can't sell vocational education. We need to get a program that we can sell, that is a serious program involving a lot of the workplace learning, but it is a program that has to be sold to the mainstream. It is a large effort, and it is not on the table now.

Chairman **SARPALIUS**. Mr. Samuel, you talked about tax breaks, tax incentives for businesses who want to retrain their employees. For that type of tax break, tell me what you envision in that area. Are you talking about deducting the cost of the training or what? What type of tax incentives are you looking at?

Mr. **SAMUEL**. Let me first suggest to you, Mr. Chairman, regarding the need for this. I think most of us are aware that the pace of technological change these days is such that the average worker, probably, during the course of a work life of 30 years, or perhaps more, may have to change his or her—it is more likely it will be her—skill base a number of times. So that the need for training on the job, long after youngsters have finished high school or their vocational education period of life, is going to become more and more extreme in the years ahead.

About 150 years ago a blacksmith could go to work as a blacksmith and be pretty confident that he would end his life as a blacksmith, and 75 years ago a worker could go into an automobile factory and be assured that he would end his job on the assembly line.

These days, a worker starts out his life with whatever skill he or she may have and because of the technological change, that person will have to change his skills several times during the course of his work life.

What is happening today—the report of the America's Choice Commission, headed by Ira Magaziner, demonstrated pretty clearly that there are few companies that undertake serious training on the job. It is restricted to less than 5 percent of America's corporate companies, and then most of that training is not aimed at the frontline worker. It is aimed at workers that have a college education, managers and supervisors. The need is very great and it is not being filled today.

How do we fill it? We can't mandate it. There doesn't seem to be any support for a training tax which was actually the recommendation of the America's Choice Commission. But I think there is growing support, and would be growing support—knowing of our budget problems, it is going to be difficult to meet that support—for some type of specific tax benefit for companies that invest in training.

We have talked about tax benefits for companies that invest in new machinery and technology. It seems just as important for a company to equip a new work force that is capable of working with the new machinery and technology.

Chairman **Sarpalius**. Have you talked to Mr. Rostenkowski about this?

Mr. **Samuel**. No. The Council, with people like Mr. Carnevale and Mr. Kolberg provided support and it has won support from a fairly broad span, such as from the AFL-CIO and the NAM.

Chairman **Sarpalius**. I think it is an excellent idea. If you want to improve productivity, you improve, the people who are putting that product together, the ones that are producing that product. I totally agree with you.

Mr. Friedheim, let me begin by first commending you in what you stated earlier, that through the courses that you teach, you went out and went to businesses and found out what they wanted in their employees, what type of training, and what type of skills they needed.

Tell me what you found. Where is there the most demand in your school for opportunities there for young people?

Mr. **Friedheim**. The business community is vitally involved in everything we do at the institution. They begin by serving as members of the advisory committees that design the curriculum. They meet regularly to tell us what is happening in the office with regard to new equipment, new technology, new software. They talk to us about the kinds of expectations they have for their employees with regard to their attitudes.

We spend a great deal of time talking to our students about building their self-confidence—and frankly, they come to us without much self-confidence—and we start by first having them envision themselves on the job. What are you going to do? How are you going to look? What kind of behavior are you going to have? We supplement that with active members of the business community, bringing them into the classroom. Most of them are small business persons who are vitally concerned about ensuring that the graduates who come out of our programs are ready to go to work on the first day they arrive on the job. They don't have time, nor the resources, to prepare them to do anything beyond that.

What they have to do is learn them, whatever the characteristics are of that particular office or law firm or bank or insurance company, as they go along. But they have to be ready to go to work and sit down the first day and engage in whatever the software, engage in whatever equipment there is.

They have to be customer oriented. Customer service is very much a vital link to the future of most of our small businesses. They have a client base they want to keep regardless of what services or products they provide. It is essential that the secretary serve as the frontline to that involvement in many cases.

So what employers tell us that these students have to know is they have to have a good, strong technical background, and they value to have a good academic background; and they told us that one year is not enough. They want them to have an associate degree, so they have something to build on and they understand more about the dynamics of our economy.

They have to have good work ethics and work habits, how to come to work on time and how to dress and how to behave and how to work as team members.

Chairman **Sarpalius**. Are all of your students high school graduates?

Mr. **Friedheim**. All of our students are high school graduates, yes. But that doesn't mean that we have a uniformity of level of abilities.

As you know, having been a part of the Texas legislature, you can appreciate the fact that graduation from high school in Texas doesn't necessarily mean that you can read at the 12th grade level. As a matter of fact, it means that you can read at the sixth grade level.

It also means that when they come to us, we have the same problems with those high school graduates as small business people do. We have to spend a great deal of time helping to elevate their reading level, because textbooks at the college level are written at the eighth and ninth grade level. So you are going to run into instantaneous frustrations, and we have to be cognizant of that problem.

Chairman **Sarpalius**. Is your enrollment increasing?

Mr. **Friedheim**. Yes, it is. We have 750 students from Oklahoma, Texas, and New Mexico who spend months with us in Dallas. One of the ways that we have been successful is because we interface with the employer all the way through the process. We have two full-time people who do nothing but get our students interviews upon graduation. It is their sole responsibility to provide them with a placement opportunity, and we graduate 74 percent of those who enroll and we get 95 percent of those who graduate jobs in the field in which they have been trained.

Chairman **Sarpalius**. Great.

Well, let me again thank each of you gentlemen for being here today. We have covered a lot of ground together, and I appreciate it very much. Any additional information or input you would like to give us, we would be glad to have it. Thank you.

Chairman **Sarpalius**. On our next panel we will hear from Ms. Janet Bolen, Mr. Howard Graeffe, and Mr. Tim Witsman.

Chairman **Sarpalius**. First, we will be hearing from Ms. Janet Bolen, program coordinator of the Education is Essential Foundation. Right?

Ms. **Bolen**. Correct.

Chairman **Sarpalius**. Mr. Howard Graeffe, president of Graeffe and Associates.

Mr. **Graeffe**. Yes, sir.

Chairman **Sarpalius**. Mr. Tim Witsman, president of the Wichita Area Chamber of Commerce.

STATEMENT OF JANET A. BOLEN, PROGRAM COORDINATOR, EDUCATION IS ESSENTIAL FOUNDATION, INC.

Ms. **Bolen**. Thank you for this opportunity to share with you what is going on in our community. It is an honor to follow the gentlemen who were seated at the table because so much of what we are doing in Dalton, Georgia is based on the policy and theories that they have been establishing, and we are in the trenches doing it.

As you know, last week newspaper headlines across the United States announced the release of the National Adult Literacy Survey conducted by the U.S. Department of Education; and for those of us who work in workplace training issues, we knew the report was coming, and we dreaded what it would reveal. Our fears were well founded: Nearly half of American adults read and write so poorly that they are unable to function effectively in the workplace.

In our community, we have decided that these data represent the single most significant challenge facing small businesses in the training of new employees and upgrading the skills of currently employed workers. If businesses employ workers who lack basic literacy and numerary skills, even the most luxurious training budgets for quality improvements and technology upgrades will be money thrown down a black hole.

Basic skills are exactly that, basic and fundamental. If they are lacking, businesses small or large will find it difficult to remain viable and competitive in hometown America, not to mention in the global economy.

As the analysis data indicated, a high school diploma is no guarantee of adequate literacy skills. The NALS data indicate that more than half of the high school graduates were found to have restricted abilities in math and reading. Thus, it is painfully obvious that the American education system doesn't adequately prepare today's students for the work force.

Business and management gurus predict that in the age of information and technology, we are all going to change jobs at least a half dozen times before we retire. The reengineering of American business is already flattening the organizational chart so that high performance companies expect their workers to be flexible, able to work in teams and to take on more responsibility in making decisions and solving problems.

We know that the SCANS report that was released last year made recommendations on what sort of preparations schools should be providing that students need to work in a high-performance work environment.

So we have the NALS report that makes recommendations that, at present, schools are not doing an adequate job in carrying that out. So the challenge now is to use these reports as a catalyst for revolution in American education and in work force training.

As Education Secretary Riley said last week, with the release of the NALS report, these data should be a wake-up call for everybody in America. We got our wake-up call 11 years ago in Dalton, Georgia.

Let me share with you what has been going on in our community in terms of preparing the work force. Dalton, Georgia is a community of 72,000 people. We are the carpet capital of the world; 70 percent of the carpet manufactured in the United States is produced within a 50-mile radius of Dalton. We are 90 miles north of Atlanta, and for decades, there has been an abundance of jobs that could be done with low skills and pay relatively high wages. This has attracted low-skilled workers to our community. Their children have been following them by answering the siren song of a job in the mills.

So we got the wake-up call in our community in 1982, because we realized that we had the dubious distinction of having one of the highest high school dropout rates in the United States, some years topping 50 percent. But I think what I can say positively about our community is that when we came to that realization, instead of sweeping it under the carpet, we acknowledged that that was a serious problem, to have that percentage of high school dropouts; and so began in 1982 to figure out what can businesses do to keep kids in school.

We are giving them the wrong messages. If we are giving them the message that they can come to work in our mills, then they are going to come. We need to change the message.

In our community, it has been the Chamber of Commerce that has called together leaders in business, saying, this is a problem of crisis proportions. We started gathering data, and we discovered that 95 percent of welfare recipients in the community were high school dropouts and 75 percent of the folks in the county jail were high school dropouts. You track the social problems that the community was dealing with, and you had a disproportionate number of high school dropouts. We acknowledged it and went public with it.

We started a public awareness campaign to raise the awareness of what those figures were and what it was costing our community. We began a speakers bureau.

My background in the past has been teaching high school, and I know that high school teachers have limited credibility with teenagers, saying, "You have got to say in school." Of course, what else is a teacher going to say? Even parents, what are parents going to say? But we established a speakers bureau where volunteers from business and industry went into the classroom, saying, "I work for company X, and I want you to think. If you think you are going to drop out of school and work for my company, we don't have jobs for dropouts. These are the skills and talents that our company needs"—and some of the conversation in the earlier panel focused on, kids don't have a realistic understanding of what is required in the workplace.

We wanted to get the employers in front of kids, saying, "Here is what I make, and here is the educational path that I had to take to get here, and we just don't have opportunity for dropouts."

So we were pleased with the result of that. The dropout rate did go up and down, depending on the economy, sad to say.

Of course, when there are boom times, you can hire anybody who can walk in the door. But more recently, around 1989, we began to take stock of where we stood and we came to the realization, it didn't take a rocket scientist to reach our students if we had had decades of dropout rates, where were those people now? The answer was, they are at work in the carpet industry.

These people are going to be in the work force for another 30 years. I think that a lot of them are dropouts, and we know that a lot of them that completed high school may have limited skills, and the carpet industry is becoming high-technology. In order to compete in a global economy, we have a serious skills gap that needed to be addressed in a dramatic way.

Once again it was the Chamber of Commerce where business and industry came together to say, "What are we going to do about the lack of basic skills in the workplace?" It was determined that one aspect of the solution—because it is a large problem, it is a multifaceted problem, and it is going to require a complex and a multifaceted solution—one solution was to begin to encourage industry to use technology in upgrading the skills of their work force. How about trying out computer-aided instruction?

So the business community established the Education is Essential Foundation to serve as a conduit for businesses to channel their human resources in terms of volunteers, and their financial resources in terms of contributions, to begin to have a community-wide impact on the adult literacy levels in the workplace.

Our objective back in 1990 was to raise $300,000 and we have passed that. Our objective was to get computers into 25 places of business, and we have surpassed that; we are now up to 38. GED rates have gone up, and as a side benefit, high school dropout rates have gone down.

We have found that parents who have finished their GED Program are committed to keeping their kids in school. We feel good about that. But we have also discovered that to tell adults that if you get your GED that that will prepare you for the world of work from now on is simply not true. In a lot of cases there is very little transfer in terms of performance, measurable performance on the job, from what they could do before they passed the GED and what they can do after. They are learning to solve problems on a sheet of paper, but they have difficulty with applications in on-the-job situations. So the newest aspect of our project for the Education is Essential Foundation is to develop job-specific training materials.

The carpet industry is a young industry and their training methods and techniques are nonexistent. The new hire stands beside the old hand at the mill and that is the way the training is conducted. So we are going through a process of conducting job task analysis for the industry. The Foundation is going to do this, and we feel excited about the response that we have gotten from the industry. They are saying, yes, this is what we need. We want concrete, systematic ways to train our people in exactly what they need to do to perform the job. They feel like this same piece of material would be valuable in getting ISO 9000 certification, in preparing their workers to go to statistical process control classes in a way that the traditional GED Program was not.

We are delighted at the response from the public schools in our community. The Dalton school system has gotten a second year of funding from the Appalachian Development Program for a second year of an apprentice program.

The school is saying, "You are telling us that the kids that you are getting today are not prepared for the workplace. Tell us how to prepare them better." Industry is saying, "We aren't educators, we are manufacturers, we don't know. You are the educators, you tell us."

So you have both sides—on two sides of a chasm wanting to reach each other. The schools want to prepare kids better for industry, and industry wants to cooperate with the schools in the apprenticeship program, but not having anything concrete to show to the schools, "This is what your kids need to be able to do." So the Education is Essential Foundation is preparing materials that will be applicable for in-plant training and will be used by the schools in developing an effective apprenticeship program.

So in our program we have found that the issue of literacy and low literacy levels is tremendous, multifaceted, complex; it has developed over a number of years, and there is not going to be a quick fix. So the business community has come together to start addressing several aspects of the problem. We feel good that we are moving forward.

We have a long way to go.

Chairman **Sarpalius**. Thank you, Ms. Bolen.

[Mr. Bolen's statement may be found in the appendix.]

STATEMENT OF HOWARD G. GRAEFFE, PRINCIPAL, GRAEFFE AND ASSOCIATES

Mr. **Graeffe**. Good afternoon. My name is Howard Graeffe; I am a principal in Graeffe & Associates. Our business interests include a chain of quick lubes, real estate, cattle, and telecommunications. I have a BS degree from Wagner College and an MBA from Temple University. I have guest lectured at the Temple University School of Continuing Education and the Wharton School, Evening School Division of the University of Pennsylvania.

In the Lehigh Valley I serve on the board of directors of the Lehigh Valley 2000: A Business-Education Partnership; the School Board of Southern Lehigh as vice president; the Pennsylvania Community Learning and Information Network, Inc., as president; and the Southern Lehigh Small Business Organization.

At the State level, I am on the Distance Learning Task Force and chair one of the subcommittees and serve on the Pennsylvania Department of Education Distance Learning Committee. As a businessman and private citizen, I am concerned with the education within my State, Pennsylvania, and the Nation. I appreciate the opportunity to provide testimony for this hearing today.

The American educational system does not adequately prepare students for today's work force. Many of the pedagogues used in the classroom, as well as course offerings, have not kept pace with the demands of the work place. Some have argued that the approaches we take to education were rooted in the 19th century that were developed to assist in the industrialization of Europe and the United States.

Our education system needs to transition to enable or students perform in the post-industrial, high-technology, information economy of the 21st century. The difficulty is that there are no clear road maps or signposts to point to which could facilitate this transition.

The transition or change to meet the demands of our economy brings with it a high level of anxiety from all sectors involved in the educational process. This is manifested at the school board level by a high turnover of directors and representation by special interests on those boards at the State level, with some States forced to take Draconian measures on financing our schools and at the Federal level with the difficulties of enactment of world-class standards and goals.

As a Governor and President, President Clinton has demonstrated his leadership and commitment to bringing about meaningful educational reform by recommending the establishment of Goals 2000 and setting standards for our educational system. We should support the President on his initiatives. Educational bureaucracy would be well advised to follow Vice President Gore's lead in applying the quality process to our bureaucracy to enhance productivity and the service schools should be providing to their communities. We should encourage all sectors in our communities to come together and understand the issues surrounding education so that we begin speaking a common language on the issues.

More importantly, all sectors in our communities must accept responsibility for the education delivered in our schools. School districts, small and large business, local, State, and Federal Governments need to work together to provide the resources and the leadership necessary to bring about changes to the educational process.

We need to encourage and support programs that go outside of our traditional student lecture format. We should view our schools as resources not only for the traditional school student but for the entire community.

Examples of some new approaches would include, the New York City Board of Education is delivering physics to their students from a professor at MIT. Dr. Bernard Solomon from the Philadelphia School District has produced and delivered programs from the Franklin Institute to the Washington, DC school district and the Dallas Texas school direct via satellite on an interactive and real-time format. In addition, Dr. Solomon has produced programs in science and other subjects for non-English speaking students. The Community Learning and Information Network is being developed to deliver the best educational resources for our students and the small business entity regardless of geographic location. We need to foster the notion that education is a lifelong process.

Our vocational education system historically has been used as a placement system for nontraditional or noncollege-bound students. In some instances it has been used to remove disruptive students from their traditional classes. Although some strides have been made to destigmatize vo-tech education, there is much that needs to be done.

Many students have split schedules between vo-tech school and their home school. This leads to a lack of continuity in their education and a question as to where the students fit. Many of these students do not understand the importance of being able to communicate effectively or perform the simplest of mathematics computations.

I spoke to a manager of a plumbing supply company. He conducts seminars for his contractors on new materials and applications. Over 60 percent of the time he spent with his customers is spent on reviewing how to determine markups on the contractors' work product. I spend time with my managers and employees on basic math calculations. Many of our employees did not understand the importance of this basic skill while in school and therefore dismissed the subject as unimportant.

Our vo-tech schools need to stress the importance of these very basic skills. These skills should be taught as applications and should demonstrate how they are integrally involved with job they might have. Our students do not understand how these skills are connected to their well-being and productivity as employees.

Our schools need to reinforce that education is a lifelong process. There should be a higher level of continuity between schools and the employers of their students. Schools should do a better job of working with employers, and employers must take the lead in stressing the importance of education to young employees. Employees that need remedial help should be encouraged to seek it out. Employers should communicate and work with their schools to make available the remedial help. By broadening the dialog between schools and business, reinforcing that education is a lifelong process and working with our young employees before and after graduation, the transition to the work force would improve. This dialog and continuity would provide a seamless transition to the work force and reinforce to our students the importance of education. The notion that education and improvement of our skills doesn't stop and start but is part of a continuum is paramount.

There are many costs associated with a poorly educated work force. They include the cost to train and remediate our employees, high turnover of employees, the ability to sustain productivity gains are diminished and the margins of profitability on our services or products are strained. The time we spend on basic concepts for our employees unable to perform basic math or communicate effectively with our customers costs us in the form of lost sales or profits. The implementation of new systems takes longer.

Employees with low-level skills change jobs frequently which force us as employers to spend the resources necessary to continually train new employees rather than improving our services or products. I believe these costs can and do impact the survival of many small businesses.

The primary challenges facing small businesses as they relate to training are making the commitment of time and resources necessary to having a highly productive work force. We need to reinforce the work being done in our schools, take the responsibility of working with our schools to smooth the transition between the work place and school, instill in our young employees that education is a lifelong process, encourage our current employees to upgrade their skills, work with our educational institutions to insist on excellence from their students and our employees. We must look to leverage our resources so that the remediation and upgrading of our employees skills are affordable and available.

I believe that education and training is the platform on which our economic prosperity depends.

Thank you.

Chairman **Sarpalius**. Thank you.

[Mr. Graeffe's statement may be found in the appendix.]

Chairman **Sarpalius**. Mr. Witsman.

STATEMENT OF F. TIM WITSMAN, PRESIDENT, WICHITA CHAMBER OF COMMERCE, CHIEF EXECUTIVE OFFICER, WISE PROGRAM FOR GROWTH

Mr. **Witsman**. Thank you Mr. Chairman. I am Tim Witsman and the chief executive officer for the Wise Program for Growth.

I am not going to read my prepared testimony where I tried to answer the five questions directly, but instead kind of hit some of the themes here; and I will go quickly over the first question, which had to do with adequacy of the system.

We continually are surveying face to face with companies, trying to find out what their problems are. Five years ago that began to be things like basic skills and motivation. It is very disturbing in a place like Wichita, Kansas, which is known for a work force that is high tech. A company came in and said you don't have to explain that the work force is good; we know that.

A couple of years later we started to notice that companies were hiring GED's before they would hire a high school graduate. The GED had some meaning. You did have to pass a competency test.

The high school diploma has lost any content. Our larger companies simply don't hire high school graduates. You have to have worked at another company or had some additional training, vocational training, but direct access to a company from high school is a closed door today.

One of our biggest problems, which has been mentioned here, is not just the image of vo-tech; it is that the parents and the kids that are graduating don't get it. A Harris poll about a year ago was showing a disconnect between what the recent graduates, parents, businesses, and colleges thought. The parents and kids were saying that they were well prepared. Two-thirds of them—two-thirds of the employers and institutions of higher education said they were not prepared. So there is a greater gulf there.

We also ought to at least mention today—there has been great testimony; I have learned a lot—that a lot of the problems we are talking about are not coming from within the schools, and changes in the educational systems are not going to solve those. They are outside forces and we have to do many things out there.

The danger that I see to the society and then also to our cities is the collapse of these public education systems. The collapse of those systems means that the middle class—it is no longer white flight, it is middle class of all colors moving out. It means then that the only thing that is left are the rich and the poor, ridiculous taxes on what businesses are left, and then the final implosion. So that is what we are up against and that is what we are working to solve.

We run a number of programs. I don't want to focus on them, but I want to make two points about what we think has to happen K through 12. We are for standards, but there are things that are going to have to be done for disadvantaged kids. We have a Grow Your Own Teachers Program where we have scholarships for kids who will become teachers if they will teach in our area when they complete their time in higher education.

We have a Futures Fair which gets kids beyond college night. That is where a lot of the focus has been for counselors. So that we show them vo-tech and other areas that are available.

We bring teachers in on a Teachers Network and give them paid opportunities in the summer to work with businesses and find out what is needed out there.

You made some comments about showing kids what jobs are worth and what life would be later. Fort Worth has done some of that. They take 12-year-old kids and put them in businesses to see, what does the vice president of the bank live like? What is his car like? How do they live? I would like to turn that into pictures and make that available to kids; pictures of how different occupations would pay off.

We have math coaching programs and a steps program for that 80 percent that is already in the work force where people, instead of being turned away by employers are sent for free counseling and free testing at our vocational school, hoping to lead to further training. We give them a matrix in here. These are programmatic materials from those activities.

The standards side is terribly important. It has been the weakness of the educational system. I come at that not as somebody who was sort of in business and never paid attention. My wife is a teacher; my mother is a teacher; my father is a teacher; I have taught grade school, high school, college. It is in our blood, I guess.

But it has been a system without standards. Without that, we don't see how you can succeed, whether you are talking about business or sports or anything else.

The discussion about what standards should be, I think we are all pretty much agreed they should not be nationally, governmentally imposed. If would be great if they were done at least by the States, but in some cases I am perfectly happy for competent experts in mathematics and science to develop some national standards.

Currently, we have the ridiculous situation in our area where two communities a short distance apart will have different standards in these key areas. It is absurd and not really defensible.

But we are greatly in favor of local implementation, and one of the things that makes it tough on the schools is the numbers of mandates that come out from the Federal Government and from the State government which tear them in different directions, make requirements that make it difficult for them to achieve what the real focus should be.

I will bring up SCANS. I felt good that that came up in two or three of the presentations today. What SCANS has done, we have brought the superintendents together. They now meet on a regular basis. But SCANS has made availability a vocabulary that is common to both sides. We had the business people saying, "This is not adequate, but I can't explain it." But we have just explained a survey to the school superintendent of many of those SCANS skills which he wants to use to help build the curriculum.

I would like to talk for a moment about vo-tech. It is more than a comfort to have as Chairman of this committee someone who clearly understands vo-tech, that it is not dummy school. The interesting thing, I have had some arguments with folks who couldn't see what the value would be of vo-tech to kids. I pointed out that we have a lot of machine shops in Wichita and those machine shop owners didn't go to Harvard; they are vo-tech graduates. As we pointed out, we have a small percentage, maybe 20 percent, that are going on and getting world-class training; and a lot of kids who are not, or are flunking out of college, that we might look at some of the funding that we are currently doing, including Federal funding, and look at a 13th year of funding as a vo-tech level of funding. I don't propose that, but simply that we look at that as a possibility.

One of the things that is kind of scary, I think, for people and makes the system hard to access is the multiplicity of programs. The National Commission on Financing Post-Secondary Education has been to Wichita, and I testified for them and I read all the papers that were presented from the other hearings around the country. What came out of that, there are already so many programs, and people proposed a multiplicity to that multiplicity. I am not sure we are served by that. I think something simpler would be a great advantage.

I would suggest that things done at the State and the national level to shift the priorities, so that there is more emphasis on vocational, would be worthwhile because much of the money that is going into the noncollege track—the dummy math, those other kinds of courses—are really quite wasted; and I point out, Fort Worth is a good example. They did away with all of that junk math and went to algebra for all the kids and saw a dramatic increase in the scores of the minority and disadvantaged kids.

There are some barriers. It may be uncomfortable to say them but they need to be said.

At the moment, small business is having a tough time. I had a letter that went to the chairman of one of my boards recently. It was from a judge and he was saying what can we do to get these small businesses to hire more people and to hire these kids? Our problem is these folks out there don't have jobs.

He was a well-intentioned man, but it also was clear he did not understand the economy. The small business people are groaning a bit under the burden of potential and existing taxes and mandates. The fear right now, and I talked to smaller businesses who are not providing health care, is the new plan there.

The minimum wage, the way it is dealt with in this country—as you know in Germany, they use a subminimum wage if you want to do an apprenticeship. Here, when we increase it, we seem to make it even more difficult for disadvantaged teenagers.

Every time I go to a conference—I had a 2-day one in our community at the end of last week, on Friday and Saturday—typically somebody will always bring up what we really should do is get the companies to go out there and hire a bunch of kids. Can't we get 3,000 kids hired next summer?

It is very difficult when, for example, our largest employer is laying off 6,000 people. Very hard to tell mom and dad, the breadwinners, that they are out of a job but we will find a way to do that, kid, in the summer. So we have a lot of that to work around.

I think the apprenticeship thing because of the downsizing is going to be a little tougher. If we started it 10 or 15 years ago, we would have had the whole thing in place, but it will be tougher to do.

I would come back and mention one last time this thing about the conditions from outside. Those have to be dealt with. You cannot deal with success, the kind of success you want and that you found in your experience strictly within that classroom now.

We have proposed in trying to work with other groups within our community, our city and our county, our university, too, and the school system, a neighborhood Renaissance Program, because we think in some places we have to go help people organize and take back their neighborhoods. Not provide them services, not come down as gods from on high, but to help them create their set of priorities and strategies. Because if they cannot take that neighborhood back, the child coming in is so concerned with other things and so damaged that all of the good systematic work and help, work may not succeed.

You also asked the question about what the Federal Government could do to help of previous panelists, and I think one of the things to do is help on this curriculum development. There are institutions out there that can help do the kinds of things you are interested in, whether it is a regional education lab or some other institution.

I would also ask, to the degree that you can have influence over it, to try to keep this culture war battle out of this thing. It has been very annoying to those of us who have worked really hard on the education reforms, particularly at the State level, to get caught between the contending groups in that. Some of us have had some really nasty things said about ourselves from both sides because we have tried to make changes in the school system.

I think another look at mandates to free the schools to focus more intently upon these primary things that I think are what you have talked about being the most important and we would agree.

Thank you.

Chairman SARPALIUS. Thank you, Mr. Witsman.

[Mr. Witsman's statement may be found in the appendix.]

Chairman SARPALIUS. Let me commend all three of you for excellent testimony. We again covered some more ground on the problem that we have with the educational system.

Ms. Bolen, tell me, in Dalton, Georgia, did you find that the carpet companies that you were referring to. Did they cooperate with you on trying to emphasize getting a high school diploma?

Ms. BOLEN. One of the things we did—it is interesting. This was done back in 1986, and I get calls every week. I got one Friday. The community came together and wrote what we call a five point proclamation.

Point one, we will give hiring preference to high school graduates. If we hire a high school student that is still in school, we will monitor their classroom performance, and if their grades drop they will lose their job.

We will encourage our employees, our adult employees, who have not gotten their diploma to go back and get it. We will institute programs in our own company to recognize and encourage educational excellence among our employees and among their children.

So there were five points. Of course, this does not say any where that we swear we will not hire high school dropouts, but over 300 companies signed that and have it framed, hanging in the employment office, and so the point of that was to present a united front to the kids of our community that education is essential, and we want educated workers and we are going to give hiring preference to folks that have finished high school.

So they participated in that and that was done originally back in 1986, and then they had an opportunity to repledge in 1990 and again over 300 companies did that. So they are behind it all the way in situations like that. They have contributed heavily to the foundation.

It is interesting, I assumed that even the largest, particularly the largest company, which has 22,000 employees, would have a pretty sophisticated handle on this basic skills issue and have a program, a systematic program in place to deal with it in their place of work, and that is just not true. So they are eager to come to the table.

As the foundation coordinator, I am the convener and the clearinghouse in the community, and when I found Mr. Kolberg's book, I made sure that everybody that was active on the foundation and on the committees read it. When I found Mr. Carnevale's booklet from ASTD, that became sort of a working paper in our community.

So they are eager. They acknowledge they have a problem with education levels in their work force and they acknowledge they don't know what to do about it and they are eager to come together to admit that and say what are you doing that is working and share solutions from competitors to work together to find solutions. So they are embracing this collaborative approach wholeheartedly.

Chairman **SARPALIUS**. Tell me what has happened to your unemployment since 1986 to now.

Ms. **BOLEN**. We are a sort of anomaly. Our unemployment now is at 3.5 and they say that 3.5 is never going to have a job. So unemployment really is not a paramount issue in our community.

Chairman **SARPALIUS**. OK. Mr. Graeffe, tell me what you are doing to improve the image of vocational education?

Mr. **GRAEFFE**. Well, I personally spend time talking to sophomores and juniors in our vo-technical schools to talk to them about the importance of coming to work on time, wearing a clean uniform, that they are a front line to the customers that come through our doors and how they present themselves is the very essence of our business.

So that is one of the things that I personally am involved in. In addition, we, through the Lehigh Valley, 2000 have supported the Tech Prep Program and upgrading the math skills for all students in the southern Lehigh school district.

We are encouraging college-bound students to take on technical training in those areas of interest so that they can take not only the theory on the one side but start to apply it whether that is data processing or whether that is in machining of specific instances.

We have not taken it to the next step, which is where I would like to see it go, where we can have more of an integrated educational process between the vo-tech school and what we call the home base school. Our students are still split between the two. There is a stigma on the one hand, but our vo-tech administrator loves the fact we send some of our brightest kids to his school for training.

But we have a commitment from the big business in our community, and those are the kinds of things that we have been involved in that I personally have been involved in and through the groups that I work on.

Chairman **SARPALIUS**. Let me ask you a tough question. If you could choose on a tax break for either purchasing equipment or training for employees, which one would you pick?

Mr. **GRAEFFE**. I think that I would answer that from—let me answer that two ways. From an impact to the well-being of our community, I would focus on the training of employees. Our practice in our company, I train all of our employees. They come in for a formalized training program. I encourage our employees to seek additional education. We reimburse them for that education, and we have been able to diversify our business interest as a result of that. So I would focus—I would say from that perspective, I would focus on the employee.

From a financial vantage point, clearly, tax incentives on plant and equipment are superior.

Chairman **SARPALIUS**. OK. Mr. Witsman, tell me a bit more about your Futures Fair you talked about.

Mr. **WITSMAN**. We have done this as a county-wide operation and we bring in not only the universities but the proprietary schools and the vocational schools, military, and other options that are available to kids. Then some of the school districts bus all their, say, juniors and seniors in, so we run thousands of kids through in a day or two.

It would be similar to what you might have seen as a college night, but large. Done at the civic center, with—well, let's say 100 or more exhibitors. That is what the Futures Fair would run. Usually for a day or two in the fall, we would run it.

Chairman **SARPALIUS**. Is that anything like what we would call a Career Day or——

Mr. **WITSMAN**. It might be. I am not sure.

Chairman **SARPALIUS**. Is it at this fair where you have different occupations represented, and people come in and talk to students about jobs?

Mr. **WITSMAN**. We have tried to keep it away from being an application to a specific business and more the career, yes, so that they are not there to try to get a job at Beech but they are there to try to learn, if I wanted to be a machinist or a lay up person at Beech what would I need to know, yes, sir.

Chairman **SARPALIUS**. Is there a lot of interest in it?

Mr. **WITSMAN**. Yes, in fact, it has been, as things have gotten tougher, the interest has grown among the kids.

Chairman **SARPALIUS**. How does a high school work with you on getting kids at the fair?

Mr. **WITSMAN**. It is a mixed bag. Some of the districts will bus basically all their juniors or seniors to it. Those are the ones in the outlying areas. We have 10 school districts in our county, all of whom participate in our partnership. The main school district of

Wichita sometimes has bussed, say the seniors; sometimes have told kids to go on their own. But on their own it is pretty tough for the kids from the disadvantaged areas.

Chairman SARPALIUS. Are you working in that area, trying to get the disadvantaged students to participate in something?

Mr. WITSMAN. Yes. That is what we have to do, we have to get transportation for those kids. In fact, the very first time we did it, it was hilarious, we had one high school that didn't want to cooperate with us because we are not going to have an Ivy League school there, and I think that is the kind of mind-set you had run into before, too.

Chairman SARPALIUS. I really think that as we look at our educational system, that is a real weakness; that we spend an awful lot teaching kids the basics, which we need to do, but I wonder at times, kids that drop out, if we could have saved those kids if we could have led that kid to find out what is their clique; what is their area. Is it art work or is it an electrician?

Mr. WITSMAN. We are too late, Mr. Chairman, getting to it. That is why I mentioned Fort Worth and the 12-year-old, trying to get those kids 2 weeks of experience. Junior or senior is too late.

Chairman SARPALIUS. Yes, I agree. But it is a shame that a lot of schools don't have programs like that. I don't think it is the role of the Federal Government to come in and mandate programs like that. It is work like each of you have expressed here today, the commitment that you have given to the Chamber and to your community, and the ultimate winners will be the kids that you are trying to help.

But it amazes me, though, how many schools don't have things like a Futures Fair or Career Day or whatever you would call it, and it is unfortunate that is only 1 day, and there are many, many occupations out there that if kids found what they wanted to be, they would work in that direction.

Let me thank all of you for being here today. The testimony was excellent and we have covered a lot of area. We will continue to gather additional information. There are several bills that are on the calendar that we are working with Education and Labor on and some of the other committees that deal with education legislation. But I am very, very interested in trying to help and work in this area, and I think working together with the information you have given us today will be extremely beneficial, because there is no question that we have to change the direction we are going in that area.

In the type of occupation I am in, you have to always be trying to look into a crystal ball to see what the future holds and what can we do to better prepare ourselves as a country to meet the problems and demands and goals of the future. There is no question in my mind that we have to revamp our educational system to work more hand-in-hand with business and help prepare our young people to meet those challenges that the future holds for them.

Thank you very much.

[Whereupon, at 4:25 p.m., the subcommittee was adjourned, subject to the call of the Chair.]

APPENDIX

STATEMENT OF REP. BILL SARPALIUS, CHAIRMAN
SUBCOMMITTEE ON THE DEVELOPMENT OF RURAL ENTERPRISES, EXPORTS AND THE ENVIRONMENT

EDUCATING THE SMALL BUSINESS WORKFORCE

September 21, 1993

A recent report on adult literacy by the U.S. Department of Education found that 90 million adult Americans are functionally illiterate. The same study reported that 50 million adults in this country do not have the skills necessary to use a calculator for basic addition.

So, we have to ask ourselves these questions: When our children graduate from high school, will they have mastered the basic skills of reading, writing and arithmetic? Will they have minimum computer skills, and will they become productive members of the workforce?

Of all the students that made it through high school, only 20 percent will graduate from college and move on to the high wage jobs a college degree promises. So, what happens to the remaining 80 percent? Do these kids have the skills necessary to become productive members of tomorrow's work place? Can they even meet the demands of today's businesses?

If we, the public, cannot educate our young people in the skills necessary to become productive members of tomorrow's workforce, we will erode this nation's ability to compete with the high-skill, high-wage workers of the seven industrialized countries and the low-wage, low-skill workers of Mexico and the Pacific Rim. America will become a nation of high-wage, low-skill workers -- and that speaks poorly for our economic and political future.

What are the costs to society? Each year, 700,000 young people drop out of high school without the skills necessary to find and hold a decent job. Roughly, 66 percent of all prison inmates have not graduated from high school. Even worse, experts estimate that only 12 percent of all welfare recipients have a high school diploma. Too many people in this country lack the skills necessary to become productive members of the workforce.

Furthermore, the only jobs available to under-educated Americans are low-skill jobs, and these kinds of jobs are shrinking in number as the U.S. work place becomes increasingly more complex.
According to a 1987 Hudson Institute report, only 27 percent of all future jobs will fall into low-skill categories, compared to 40 percent of jobs today. Education and training are critical for today's work place.

Business has been the first to recognize the problems of a poorly educated workforce. Perhaps they notice it when the try to change work processes or they might notice it through work habits, but they have noticed it and they are here today to warn us about it.

There has been a lot of talk lately about the cost to businesses of various regulations, laws, and mandates, but little discussion over the cost to business of a poorly educated workforce.

Companies, large and small, must invest time and money to teach workers the basic skills to run complex machinery. Already, U.S. employers spend about $30 billion a year on formal worker training, but that money only reaches about 7 percent of the workforce in less than 1 percent of U.S. businesses.

The cost to business, however, of NOT teaching workers basic skills and further training holds a much greater economic cost to this nation.

Just as knives make it easier to cut and slice, education makes it easier to solve problems and to find new solutions. An educated workforce is a dynamic and skilled workforce. A workforce that can make businesses competitive with any country in the world.

In fact, a well-educated, dynamic workforce is critical for America's economic survival. This is a hearing about survival -- the survival of America's economic lead and our way of life. Today, we will ask what needs to be done to improve the overall quality of American education.

While knowledge in, and of, itself is a wonderful thing, education has a practical application. This Subcommittee is concerned with the practical application. Education is a tool -- it is a means to an end. Unfortunately, education in America has become a means to a diploma -- not a means toward a job. The time has come to prepare students for the realities of the workforce. Like a rising tide, if we raise the education and skills of American adults, we will increase our nation's competitiveness.

JOEL HEFLEY
COLORADO
FIFTH DISTRICT

COMMITTEES
ARMED SERVICES
SMALL BUSINESS
INTERIOR AND INSULAR AFFAIRS

Congreſs of the United States
House of Representatives

STATEMENT OF CONGRESSMAN JOEL HEFLEY
SUBCOMMITTEE ON RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT
SEPTEMBER 21, 1993

Thanks again, Mr. Chairman, for addressing another issue that directly impacts small businesses and the American people.

Right now, parents and taxpayers across the country are fighting to systematically reform our schools. These reforms go right to the core of how we provide education to our children.

But if systematic reform is called for, it doesn't pay to tinker around the edges and, frankly, some of the reforms outlined in the testimony today do just that: tinker.

In my lifetime, I can't begin to count all the "reforms" that have been implemented to improve our public schools. More money, a more diversity, longer days, shorter hours, Head Start, second chance, new math, old math, conflict resolution, values clarification. Apparently, they've been less than successful.

Meanwhile, America's parents are voting with their feet and leaving the public schools in droves. The true advances in primary and secondary schooling today are being made by private and home schoolers, not the public schools.

It's illustrative that America's President, a man who expresses more confidence in the abilities of government than anyone I know, enrolled his daughter in a private school.

We need real reform to address our problems, not just tinkering, and I hope the business groups represented here today are prepared to fight for those reforms. Otherwise, we're condemning another generation of children to a system that's proven to be mediocre at best.

Thank you again, Mr. Chairman, for holding these hearings and I look forward to the testimony.

NATIONAL ALLIANCE OF BUSINESS

25th Anniversary of Helping America Work

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National Council of La Raza

TESTIMONY OF

WILLIAM H. KOLBERG

ON BEHALF OF THE

NATIONAL ALLIANCE OF BUSINESS

BEFORE THE

SUBCOMMITTEE ON RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT

COMMITTEE ON SMALL BUSINESS

UNITED STATES HOUSE OF REPRESENTATIVES

September 21, 1993

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TESTIMONY OF
WILLIAM H. KOLBERG

ON BEHALF OF THE
NATIONAL ALLIANCE OF BUSINESS

BEFORE THE
SUBCOMMITTEE ON RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT
COMMITTEE ON SMALL BUSINESS
U. S. HOUSE OF REPRESENTATIVES

ON "EDUCATION OF THE SMALL BUSINESS WORKFORCE"

September 21, 1993

I appreciate your invitation to discuss the importance of ensuring that American workers are well educated for the competitive demands of the future, and that the American education system is preparing students for the workplace.

I am William Kolberg, President of the National Alliance of Business. The Alliance is a non-profit, business-led organization dedicated to building a competitive U.S. workforce through public education reform, improved job training systems, and comprehensive human resource development efforts for all individuals regardless of economic circumstance.

The recent round of statistics released by the U.S. Department of Education vividly demonstrate, once again, how poorly prepared individuals are for the challenges of an increasingly global and competitive marketplace. The conclusion drawn from the Education Department's literacy survey reveals the dramatic finding that some 90 million adults - about 47% of the U.S. adult population - are afflicted with literacy problems. What is more alarming is that the overwhelming majority of adults who performed at the lowest two literacy levels said they could read and write well or very well. Only 22% of the test takers could perform the simplest job tasks, such as adding entries on a bank deposit slip, locating the time of a meeting on a form, or identifying pertinent information within a larger passage of text. These statistics coupled with reading results of the National Assessment of Education Progress demonstrate that the American public education system is failing a significant proportion of American students and that those individuals will be poorly prepared for the demands of the modern workplace.

American education quality is more widely, and more often, talked about among business leaders today than I would have imagined possible a few years ago. The American education enterprise, which worked well for most of this century, has not kept pace with the increasing demands of modern society and our competitive economy.

We are a society whose economic future relies heavily on the quality of our workforce. We must dramatically improve both how and what we teach for all our youth and equip them with the knowledge and skills for the world they will enter.

Business has experienced, first hand, the results of lower American educational achievement. U.S. education performance has declined, when compared to other industrialized nations. This shows up in the workplace through lower productivity, lower wage growth, and a diminished competitive posture in the world market. This explains, in part, the compelling interest of business in education, although our interest as citizens in the quality of our society goes beyond the bottom line.

The national concern over education led the National Alliance of Business in 1989 to join in partnership with other national business organizations and form the Business Coalition for Education Reform to work over the long haul with community leaders to help reverse declines in education quality and economic opportunity. (The Business Coalition for Education Reform includes: American Business Conference, Black Business Council, The Business Roundtable, Business-Higher Education Forum, Chamber of Commerce of the United States, Committee for Economic Development, The Conference Board, Council on Competitiveness, National Alliance of Business, National Association of Manufacturers, and U.S. Hispanic Chamber of Commerce.)

We in business see the failure to educate our young people to world class standards as a major national economic problem which will be solved only if we apply the national will, new strategies, superior technology, and new institutional structures which can lead us to world-class competitiveness by the year 2000.

The industrialized nations who have become our key competitors around the world are those who long ago recognized the importance of education for their economic well-being. They each have adopted a national policy and practice for a systematic transition from school to work for all youth, and, with a high level of education skills in their workers, each has been able to organize work more efficiently with greater productivity by cultivating higher skills in front line workers. Their approaches to developing work opportunities through high skills and high expectations draws a sharp contrast to America's current approach.

Education Reform

The federal government, for its part, must be much more pro-active in its leadership to set the tone, set the agenda, and motivate action. There are several federal roles which can be played by the Administration and the Congress. The federal government should be undertaking a leadership role in developing standards for meeting our educational goals, so that there can be no doubt about what states need to do and where children rank in terms of what we have to achieve by the end of this century. There is a role for leading-edge research and development that supports state and local efforts in education reform. There is a role for targeting additional resources on disadvantaged students. And, there is a role in developing a national system of school-to-work transition assistance.

In may ways, this hearing is a timely one. This Administration and this Congress have placed education and workforce development issues higher on the national agenda than at any time in recent memory. A number of pending legislative initiatives, if they are coordinated and rationalized into a cohesive national strategy will begin to reverse the trends we see in the recent reports on low literacy skills.

The Congress has a unique opportunity to enact education reform legislation this year through the President's proposed "Goals 2000: Educate America Act." It would begin the development of voluntary, national education standards and would develop assessment systems to measure our progress along the way. This legislation is an important first step toward comprehensive reform of education. The bill is out of committee and is waiting action by the full House. Most of the concerns we originally had with the House version of the bill are being addressed, and I believe we can support it. I believe that the final compromise with the Senate will produce an appropriate federal role in leading education reform in the states.

Not only does the Goals 2000 legislation encourage the development of core academic compentencies and assessments, it also creates a national skill standards board to facilitate the creation of occupational skill standards that will be used to upgrade worker's skills and guide the employment and training system. These skill standards would be developed through partnerships of business, labor, educators, and human resource professionals. The standards would provide a nationally recognized skill certificate for competencies in certain occupational clusters that would be determined by the board. This is an important step in helping to guide workers as they decide what careers to pursue and the skills requirements of each.

Likewise, the President has recently submitted major legislation that completely restructures federal assistance under the Elementary and Secondary Education Act, the largest source of federal assistance for basic education. This bill is called the "Improving America's Schools Act of 1993." From my initial review of the bill, I am impressed by how well it is conceived and coordinated it is with other education assistance, and how well it supports the strategic goal of systemic education reform. The bill is intended to offer federal support for comprehensive reform, not piecemeal improvements. I fully support the goals embodied in this legislation and would urge the support of Congress for it.

School-to-Work Transition Assistance

The need for a structured system of assistance that can enrich the career potential for youth as they make the transition from school to work is well documented. A well designed school-to-work system can also provide practical career options and hope to youth who might otherwise drop out of school.

Experience has shown that youth training works best when it is based in the work place. Many youth have strong doubts about the relevance of high school classroom work. In the work place, young workers are among adult workers, to they have models to emulate. The academic skills for language, computation, and problem solving are applied regularly in practical tasks.

The motivations of business leaders to participate in school-to-work transition programs will vary. Some view it as a new source of skilled employees, others see it as a needed social option to guide youth to adulthood, and many see it as an important component of education reform.

The President recently submitted his bill for developing a national school-to-work system called the "School-to-Work Opportunities Act of 1993." The Alliance worked closely with the Administration's task force during the development of the bill and provided particular advice on how to cultivate business involvement over the long-term. This bill provides a rare opportunity to establish the framework for collecting the expertise and resources from existing programs and services into a more effective system of career preparation and lifelong learning. The bill would build new coalitions of institutional partners, public and private. The bill would require new behavior and collaborative commitments from high schools, employers, workers, postsecondary institutions, community groups, and government who would all be part of the system's governance structure. The unique characteristic of a school-to-work transition system is the work-based learning component, which underscores the importance of business involvement for developing and sustaining a U.S. system.

Employers must have a meaningful role, in partnership with educators and other interested parties, for the design and implementation of all aspects of the program. In an ideal situation, the employer's role would be to:

- Define the skill requirements for jobs;

- Provide curriculum guidance to the schools;
- Provide structured, paid on-the-job training for students -- real jobs for real pay; and
- Provide opportunities for full-time jobs, as available, for students after graduation.

In some cases, financial incentives may help to convince otherwise hesitant employers to participate. It is hoped that many employers will get involved when they are convinced that school-to-work programs are a durable, reliable method of getting highly competent employees with a minimum of government red tape. Other employers who are not currently hiring may participate, perhaps initially on policy or program design boards, because a school-to-work system can be a means of improving education quality in public schools for youth who need key skills for future career success.

The Administration recognized that some financial incentives for business participation in school to work transition programs may be necessary and proposed a tax incentive this summer that was eventually dropped from the budget reconciliation bill. I still believe that a limited incentive like the one proposed by the Administration to expand the Targeted Jobs Tax Credit would be a helpful tool to have. The Administration has suggested a new category of eligible individuals -- participants in certified youth apprenticeship programs -- to be included under the Targeted Jobs Tax Credit program. This would provide a tax credit equal to 40% of the first $3,000 in wages paid to an apprentice for a maximum of $1,200.

I think the Administration and the Congress recognize that the school-to-work initiative will not be successful without substantial participation of medium and small businesses where most of the hiring and new job creation occurs. Some method of off-setting the expenses, especially for small employers, for the extra costs of training, supervision, and planning should be considered in the design of the program.

Past experience tells us that small businesses may not be able to take advantage of tax credits and would prefer some other type of cash payment like reimbursement for on-the-job training or modest bonus payments for successful program completion. The legislation, if enacted, should be flexible enough to allow some experimentation with incentives to determine which ones are appropriate for small businesses.

Challenge for Small Business

Our future rests on a radical improvement of our public infrastructure of schools and job training systems to provide competent new employees able to function in the changing workplace. In addition, we must recognize that most of the workforce we will have in the year 2000 is already working. This means that employers face the challenge of investing substantially more in training current workers. That challenge is most difficult for small employers who have few resources for training.

The states are beginning to experiment with some options to help small employers with current workers. Mississippi and Georgia offer a tax credit to employers who help provide literacy training to employees. Iowa has a tax incentive structure for employers who use the community college system for customized training. Several states offer technical assistance and training to consortia of small employers who voluntarily get together to train workers in a particular occupation or industry. Small employers who band together to expand the practical scale of training is an increasingly common practice, but is not widely subsidized by government. Subsidies usually apply only to remedial education skills where shared costs between the public and private sectors can be justified by the failure of public education to impart the skills in the first place. So the challenge of educating and training workers is particularly acute for small employers.

One trend we have seen recently that shows promise is the training for new technology applications which is available through state and federally-funded manufacturing "extension" centers. These extension centers offer help to small manufacturers seeking to modernize production processes and to increase efficiency. The centers help install new technology and then make training available to the employees who will operate and oversee it. As you probably know, the National Competitiveness Act, currently pending in Congress, would expand the federally-funded extension centers from about seven to over 100 nationwide. This type of on-site training in new technologies has had tremendous success, but so far is available to only a few employers on a first come, first served basis.

In Conclusion

The Congress faces a full agenda with an impressive array of initiatives that can have a major impact on education and workforce quality. The list includes education reform under the Goals 2000 Act, reauthorization of the Elementary and Secondary Education Act, the School-to-Work Opportunities Act, the National Competitiveness Act, and other initiatives for dislocated workers and welfare reform. The key for business is that these initiatives be coordinated and rationalized so that the delivery of education and training at the local level can be comprehensive and tailored strategically to local needs.

Both the Administration and the Congress appear willing to think differently and with more urgency about new approaches to preparing citizens for the modern work place. Developing public policy related to the work force must begin with a partnership that involves employers in shaping the strategies.

Without a systemic policy of providing continual improvement and expansion of workforce skills, we will not keep up with our economic competitors who are doing just that, and our general standard of living will decline. The way we develop the educational and technical workplace skills, as a society, will be more important than ever in the next decade. I can say that the Alliance is committed to working closely with the Congress and the Administration to help shape an effective workforce investment strategy that can enhance our competitive success and our future economic security.

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The American Society for Training and Development

Submitted to the House Small Business Subcommittee on
Rural Enterprises, Exports, and the Environment

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Put Quality To Work
TRAIN AMERICA'S
WORKFORCE

Thank you very much for this opportunity to testify before the House Small Business Subcommittee on Rural Enterprises, Exports and the Environment on the education of the small business workforce. I am Anthony P. Carnevale, chief economist at the American Society for Training and Development (ASTD). ASTD, which represents more than 55,000 corporate-based human resources development specialists, is the nation's largest association dedicated to advancing workforce training excellence.

Ten years ago the publication of A Nation at Risk launched a wave of school reform and a continuing many-sided debate on the future of American education. Within that debate some of the most intense discussions have been between employers, educators and education unions. The dialogue often has been a productive one, but in some cases it has degenerated into a counterproductive exercise in assigning blame.

This testimony is not about assigning blame. I argue that neither the employers nor the schools nor the education unions are villains. In fact, all are in the same boat. They face similar challenges from the emerging economic reality, requiring similar types of responses. Most important, the successful reform of each depends on the successful reform of the others.

The reform of schools and the modernization of workplaces are inextricably linked. The competitiveness of American employers increasingly depends on their ability to use and further develop knowledge originally learned in school. Conversely, the successful reform of American schools depends in large measure on expanding employer demand for more highly educated school graduates. If employers don't create high skill jobs that use the skills supplied by a "reformed" and more effective school system, the economic incentives for school reform will be blunted. At the same time, school reform is not possible without more effective collaboration and greater trust between school managers and the education unions who can provide a workers' voice central to effective reform.

The interdependence of workplace and school reform requires an effective dialogue among educators, employers and education unions. Dialogue between large and powerful institutions with different missions and cultures is always difficult. We must mediate between those cultures by reconciling their divergent views in the interest of finding common ground from which a balanced agenda for the simultaneous modernization of work and the reform of schooling can proceed.

In my view, the simultaneous reform of schooling and the modernization of American workplaces needs to proceed in the context of a set of principles summarized below.

Finding Common Ground. In a community that is both diverse and individualistic, a political system that encourages participation and a society where individuals support themselves through work, educators have a tripartite mission to provide good neighbors, involved citizens and qualified workers. Happily, the educators broad societal mission and the employers more narrow economic interest are converging with human resource needs in the growing number of "high performance work systems" where workers are more autonomous, involved and broadly skilled and where diverse workers and customers are valued.

The convergence between the tripartite mission of the schools and the needs of America's employers is strengthened further by new findings in the cognitive sciences. New findings on the way people learn suggests a reformed pedagogy that combines academic and

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work. In addition, the growing interest in community service and the willingness of American employers to work with the schools in order to get the employees they need provides an historic opportunity to end the isolation of American schools from both the community and the workplace. In combination these convergent factors suggest a unique historical opportunity to create a seamless weave of academic and experiential learning that will make our schools, communities and workplaces both more accessible and effective.

Balancing Supply and Demand. Strategies for reforming schools need to be coordinated with macro- and micro-economic policies to increase the availability of high skill jobs in order to balance the supply of educated workers with the demand for them in American workplaces. Balancing the supply and demand for educated workers will also require better information and counseling systems to match graduates with available jobs as well as more collaboration between education and economic policy makers.

The successful integration of supply and demand for skilled workers will also require profound changes in the practices of both employer and educational institutions. Educators will need stronger relationships with employers and a new pedagogy that mixes academic and experiential learning to insure that learning in schools translates into performance at work. Employers will need to adopt human resource management policies that connect selection, appraisal and rewards systems at work to learning in school and on the job. Employers will also need to adopt "high performance work systems" that combine flexible technologies and organizational formats with highly skilled workers in order to improve performance and increase demand for more highly educated workers.

Integrating Academic and Experiential Learning. The integration of academic and experiential learning serves a variety of purposes critical to educational reform, the modernization of work and improvement in the quality of community life. The combination of academic learning with applications provides a superior pedagogy for all learners; ends the isolation of schools from communities and workplaces and the isolation of youth from adults; leavens academic curriculums with the authenticity of experience; and, allows for the development of lifelong learning systems that utilize schools, workplaces and communities as learning environments.

Emphasizing Both Access and Outcome Standards. Both educators and employers have had enormous historical success in providing access to standardized goods and services delivered at low prices. Access to both education and private goods and services continues to be a primary performance standard for both educators and private employers, but in the new quality environment, outcome standards have become equally important measures of success.

Meeting Quality Standards. Quality is at the core of the new emphasis on outcome standards. Quality standards divide into nine separate domains: variety, customization, convenience, speed, innovation, consistency, social responsibility, continuous improvement and efficiencies based on a balance of investment and cost cutting. These same standards apply in business and in schools. Students, parents, taxpayers and employers experience pressures to meet quality standards in their own work organizations. They are also accustomed to demanding and getting quality as consumers of private goods. As a result, they want to see the same quality standards met in the schools.

Quality education means meeting world class educational standards consistently and for all students. It means schooling provided in sufficient variety to meet the various tastes of a student body from diverse cultures, age groups and regions. Schools are also being asked to meet the educational needs of special populations including the learning disabled, economically disadvantaged and the gifted. In addition, the educators' clientele want curriculums customized and delivered in formats tailored to learning styles of individual students. Finally, the educators' various clients expect education that is delivered conveniently, quickly and with state-of-the-art learning methods and technology.

Adopting High Performance Work Systems. Successful education reform and work modernization depend on the development of high performance work systems in both schools and workplaces. High performance work systems include five elements: (1) appropriate technology, (2) flexible and team-based work processes, (3) formal and informal skill enhancement and professional development, (4) collaborative labor-management relations and (5) total quality management principles. The synergy among these five elements operate best in work cultures that encourage trusting relationships necessary to learning and flexible competitive changes.

Investing in Access and Quality. Historically, the contributions of education to the nation's overall economic performance and to individual opportunity have derived principally from increasing access to grade school, high school and now post-secondary education for a growing share of Americans. Future economic contributions from education will have to come from a mix of quality improvements and increased access. As high school graduation rates approach 90% of all adults, the greatest economic returns from K-12 education investments will come from overall quality improvements and improvements in graduation rates for the least advantaged. Because access to post-secondary education is still relatively limited, the highest returns to post-secondary investments will come from improved access to education and training after high school, especially for non-college youth and adults.

Promoting More Effective Collaboration Between Schools and Employers. Stronger relationships between schools and employers will improve both the quality of learning and performance on the job. In order to improve the link between schooling and workplaces, learning needs to be more closely tied to selection, appraisal and rewards both within employing organizations and in their relationships with the schools. Most important, hiring needs to be more closely linked to school performance in order to motivate students. Conversely, curriculum and credentials in schools need to be more closely linked to employer requirements in order to encourage employers to rely on school performance as the primary standard for hiring.

Hiring based on school performance will encourage students to meet academic standards. This would be especially beneficial for non-college youth who have little incentive to study while in school because they are not going on to post-secondary education and because their academic performance has very little impact on initial hiring decisions and entry level wages. Standards with more relevance to employer needs would also encourage opportunity for earlier hiring in jobs with career potential. Currently, employers tend to wait to hire non-college workers in jobs with real career prospects until their late twenties because employers currently trust proven experience and maturity more than school graduation as indicators of likely performance. Stronger collaboration between schools and employers could eliminate the developmental disconnect between high school graduation and the first good job for non-college youth that only comes available a decade later, after counterproductive and unguided wandering through a series of low skill, low wage jobs.

Crafting Complementary Academic and Workbased Skill Standards. Effective collaboration between schools and employers begins with the development of academic and workplace skill standards that are complementary and continuous. Skills standards should integrate academic basics, occupational skills and behavioral skills. Basic academic skill standards should be developed and certified for all American students. Occupational skill standards should be developed for clusters of related occupations to encourage a maximum of career choices. Behavioral skills, such as problem solving, teamwork and interpersonal skills, increasingly critical to a growing share of American workers, need to be integrated into both academic and occupational curriculums and taught in an applied context.

Ending Academic Dualism. The current dialogue on schooling and work is caught on the horns of a dilemma. Critics fear tracking in work-oriented programs for non-college

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youth that will foreclose the college option. Yet the current system is clearly failing the non-college bound. In order to respond to the legitimate concern for keeping the college option open and move beyond the current paralysis on policies for serving the needs of the non-college bound, we need to refocus the current dialogue on a broader vision of a lifelong learning system in which "school to work" programs are not a cul-de-sac but a continuous set of alternative pathways to both work and learning that encourages rather than forecloses four-year degrees for those who want them.

Creating Continuous Career Pathways. Ultimately the vision of a lifelong learning system that combines work and learning should be judged by standards that measure its ability to increase choices and opportunity for both work and learning for students as well as its ability to satisfy performance requirements on the job. The diversity among American students, workplaces and communities requires a variety of alternative pathways that mix work and learning integrated by an incremental and sequential system of competency based standards.

The challenge is to build an integrated system of career pathways with different points of access and exits controlled by posted skill standards. Individuals should not be allowed to enter or exit a particulår pathway without certification of skills and applied competencies. Every exit from a learning path should be validated by accredited learning and lead to either work or continued progress along another learning path that ultimately makes a four year college degree accessible.

Career pathways should be accessible to everyone at various points of entry.

Everyone should be given a second chance, or however many chances they require to meet standards in every juncture along the way. There should be no dead ends. No pathway should foreclose the possibility of a four year college degree. For instance, standards for both "second chance" systems and for high school graduates need to be set at levels that make students both employable and eligible for post-secondary schooling. Standards for post-secondary schooling outside the four-year college system should both enhance job prospects and qualify graduates for admission in a four-year school. In addition schools should provide credit for the academic value of formal and informal learning at work in their admissions policies.

Building More Effective Transitions. The discontinuity between schooling and working in the United States no longer serves the learning and career needs of individuals at every age or the competitive needs of employers. Most students work while in school, and a significant share of employees continue schooling after they enter the job market, but relationships between work and schooling are spotty and relatively weak overall. Although many post-secondary institutions do have relationships with employers, those relationships tend to be strongest in applied disciplines and weak in the liberal arts or the more general curriculums. Those who don't go on to post-secondary institutions get little if any assistance in the transition from school to work. Adult workers have little access to intermediaries that provide counseling that helps them combine schooling and work in the interest of career development.

More effective transitions require a better articulation of continuous learning opportunities between high schools, two-year schools and four-year institutions as well as more assistance in combining work, schooling and community service in all age groups. More effective transitions will also require stronger formal and informal relationships among schools and schools, communities and employers, better labor market information and more effective counseling.

Enriching Education Reform With an Added Focus on Pedagogy. The education reform movement has been driven by a vision focused on improving performance and standards in traditional academic subject matter. The focus in education reform on improving retention of traditional academic content ignores basic pedagogical questions as to the best ways to teach content that assures its effective utilization by school graduates in the community and in the job. The current focus in education reform on "what" should be learned needs to be enriched with an added focus on "how" subject matter should be taught. Experimentation with an enriched combination of traditional and experiential pedagogy seems indicated by advances in the cognitive sciences nd should be integrated into reform goals.

Getting From Here To There. Policy discussions on breaking the traditional segregation between academic and applied learning and extending more learning and work opportunities to non-college youth usually end up focused either on Japanese models that connect academic achievement for all students to employment or European "dual track" models that provide virtually universal access to college or apprenticeship for non-college youth. Our ability to adopt the Japanese model will proceed apace with the growth of stronger relationships between schools and employers who are willing to hire based on school performance. The European systems for educating non-college students are much more impressive than our own. Yet, the sheer bureaucratic scale and costs of the European apprenticeship systems, the unique relationships between unions, government, educators and employers that govern them and their tendency to track students by social class suggest that we are unlikely to import European systems wholesale anytime soon.

While the Japanese and Europeans provide a useful benchmark, the more likely course in the U.S. is that we will grow our own reforms through evolutionary improvements in the variety of approaches emerging or already underway in the American education system. Building a reform strategy around evolutionary and varied approaches is probably both prudent and realistic. "One-size-fits-all" reforms discourages innovation by reducing the number of developmental paths. In addition, "one-size-fits-all" approaches ignore the variety of needs and conditions in the American community. Moreover, standardized reforms tend to reduce ownership and involvement of stakeholders including students, parents, educators, communities and employers.

An incremental and varied approach to reform does not necessarily result in chaos, a slow pace of change or lack of scale in reform efforts. Education reform based on incremental improvements in a variety of approaches needn't be chaotic so long as every approach strives toward a common framework of ultimate outcomes. Our own sense is that there is broad agreement on the following four outcomes:

Equity. Educational programs should provide alternative pathways available to a broad cross section of learners that lead to work opportunities without foreclosing further career development or schooling through four-year college graduation for those who want it.

Involvement. Programs should be designed, delivered and evaluated with the full participation of stakeholders including students, educational professionals, parents, community representatives and employers.

A More Experiential Pedagogy. Curriculums should reflect a balance between the traditional academic learning formats and a more experiential pedagogy. A more experiential pedagogy delivered in schools should be balanced with learning experiences outside the classroom including applications in the community and in the workplace.

Certifiable Standards. All learning should lead to certifiable performance standards that include applications and demonstrations in an applied context.

The development of a framework of principles and outcome standards can provide cohesion in a reform structure that is decentralized and varied. A framework of principles all by itself, however, will not expedite progress or create scale in the reform movement. In order to accelerate progress and create scale, varied reform efforts need to be attached to strategic efforts to "make em", "bribe em" and "show-em-how" to move toward the vision implicit in the new reform framework.

"Make-em" strategies include new performance standards set at the federal, state and community level and attached to certification and funding. "Bribe-em" strategies provide the path of least resistance. They include new program funding to assist in meeting standards or to promote new practices. "Show-em-how" strategies require the development of new collaborative relationships including the development of networks of reform programs to encourage benchmarking of best practices and the development of supportive relationship among reformers; a systematic inventory, analysis, model development and dissemination of model practices; and technical assistance.

In the final analysis, some mix of all three strategies is necessary to expedite and achieve scale in reform. "Make-em" strategies work best if resources are provided and technical assistance is available. "Bribe-em" strategies tend to result in ritual grantsmanship in the absence of performance standards and the know-how that comes with efforts to "show-em-how." "Show-em-how" strategies, all by themselves, don't provide the leverage that mandates and resources bring.

TESTIMONY

My name is George Elford. I am the director of the Washington Office of the Educational Testing Service (ETS). ETS, with its headquarters in Princeton, N.J., is a non-profit educational assessment and measurement organization and a leader in educational research and testing. We were asked to respond to six questions on the educational preparation of the small business workforce. My remarks will address each question, one by one.

Does the American educational system adequately prepare students for today's workforce? Please offer any suggestions to improve our educational system.

There is no agreement on the extent to which inadequacies in the educational preparation of young Americans are holding back the US economy. Many business leaders point to skill deficiencies as a major impediment. Others argue that we are not suffering from a skills shortage among workers — though there may be a managerial skills shortage. I am pleased to offer some relevant information on this issue and then move on to offer suggestions on how to improve our educational system.

A June 1990 report by the Commission on the Skills of the American Workforce (*America's Choice: High Skills or Low Wages*) concluded that given the way the workplace is currently organized, there is not likely to be a skills shortage in the United States. The report stated "our research uncovered a wide range of concerns parading under the blanket term of 'skills.' While businesses complained about the quality of their applicants, few talked about educational skills. The primary concern of more than 80 percent of employers was finding workers with a good work ethic and appropriate social behavior — 'reliable,' 'a good attitude,' 'a pleasant appearance,' 'a good personality.'

The picture generated by Secretary's Commission an Achieving Necessary Skills (SCANS) in 1992 was much the same. Character traits rather than academic skills headed the list, although basic academic skills did indeed make the list. At the top of the list of "foundation skills" were responsibly, integrity/honesty, listening, speaking, reading. At the top of the list of "enabling skills" were conscientiousness, cooperation, listening skills, work orientation, and speaking skills.

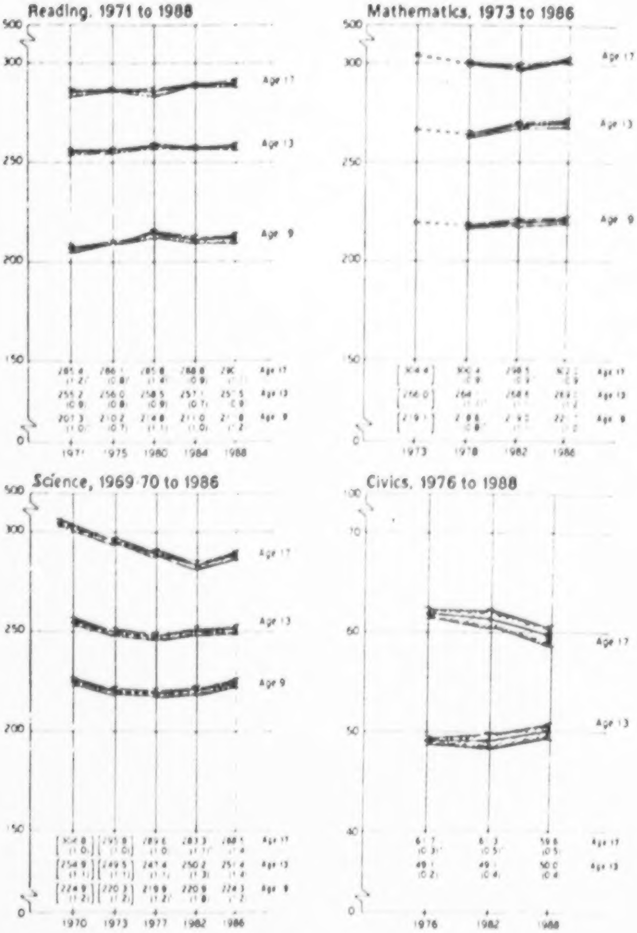
It is clear that the skills employers are seeking are only partly within the province of what schools can deliver. There are other sources of skills. A recent report by the ETS Policy Information Center, for example, described the importance of *America's Smallest School: The Family*, showing achievement linked to the number of parents, reading at home, and other family variables.

The National Assessment of Educational Progress (NAEP) gives us a report card on education. NAEP shows that the output of U.S. schools in recent years is similar to the output of twenty years ago in reading and mathematics but lower in science and social studies, as shown in the display of national trends. (See display #1.)

We also have international comparisons which show the U.S. to be back in the field in mathematics, for example. This competition is significant as we move into a global economy. (See Display #2.)

National Trends in Average Proficiency in Various Subject Areas: Ages 9, 13, and 17

DISPLAY #1



Standard errors are presented in parentheses. It can be said with 95 percent confidence that the average proficiency of the population of interest is within ± 2 standard errors of the estimated value.

[ ] Extrapolations based on previous NAEP analyses.

*Statistically significant difference from the most recent assessment at the .05 level.

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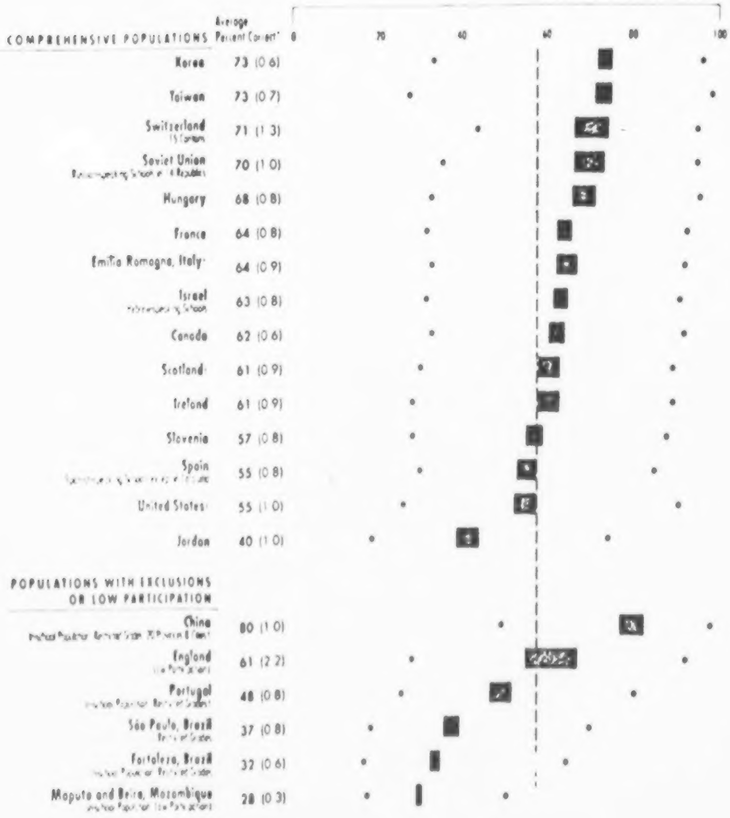
ETS/IAEP (1992)
Mathematics, Age 13

DISTRIBUTION OF PERCENT CORRECT SCORES



▬ Average percent correct with simultaneous confidence interval controlling for all possible comparisons among comprehensive populations, populations with exclusions or low participation, and Canadian populations based on the Bonferroni procedure (the average ± 2.79 standard errors).

● Between 5th and 95th percentile ... is the 1st to 10th percentiles and 90th to 99th percentiles

IAEP Average

* Jackknifed standard errors are presented in parentheses.

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Just this month, a major piece of the skills picture was filled in when the Department of Education released a national study conducted by ETS on adult literacy. Literacy was described at five levels based on performance on a series of scaled tasks in prose, document, and quantitative literacy (see Display #3). In terms of the present literacy levels of U.S. adults, (see Display 4), nearly half were in levels one and two. The report, however, noted "that the approximately 90 million adults who performed in levels 1 and 2 did not necessarily perceive themselves as being "at risk." Across the literacy scales, 66 to 75 percent of the adults in the lowest level and 93 to 97 percent in the second lowest level described themselves as being able to read or write English "well" or "very well." Moreover, only 14-25 percent of the adults in level 1 and 4-12 percent in level 2 said they get a lot of help from family members or friends with everyday prose, document, and quantitative literacy tasks. It is therefore possible that their skills, while limited, allow them to meet some or most of their personal and occupational literacy needs." They feel adequate; whether they are adequate depends on what they have to do.

This same report shows the expected relationships between schooling and literacy. (See Display #5.) Of those adults who never went to high school, 75-79 percent were at level 1 on these scales. The majority of students still in high school were at levels 2 and 3. The average scores for persons in professional/managerial/technical positions were at the upper end of level 3. The average scores for sales and clerical people were also in level 3. The average scores for craft and service people and laborers, assemblers, and farmers were at level 2. Does this mean

DISPLAY #3

Difficulty Values of Selected Tasks Along the Prose, Document, and Quantitative Literacy Scales

	Prose		Document		Quantitative	
0	149	Identify country in short article	69	Sign your name	191	Total a bank deposit entry
	210	Locate one piece of information in sports article	170	Locate expiration date on driver's license		
	224	Underline sentence explaining action stated in short article	180	Locate time of meeting on a form		
			214	Using pie graph, locate type of vehicle having specific sales		
225	226	Underline meaning of a term given in government brochure on supplemental security income	230	Locate intersection on a street map	238	Calculate postage and fees for certified mail
	250	Locate two features of information in sports article	246	Locate eligibility from table of employee benefits	246	Determine difference in price between tickets for two shows
	275	Interpret instructions from an appliance warranty	259	Identify and enter background information on application for social security card	270	Calculate total costs of purchase from an order form
275	280	Write a brief letter explaining error made on a credit card bill	277	Identify information from bar graph depicting source of energy and year	278	Using calculator, calculate difference between regular and sale price from an advertisement
	304	Read a news article and identify a sentence that provides interpretation of a situation	296	Use sign out sheet to respond to call about resident	308	Using calculator, determine the discount from an oil bill if paid within 10 days
	316	Read lengthy article to identify two behaviors that meet a stated condition	314	Use bus schedule to determine appropriate bus for given set of conditions	321	Calculate miles per gallon using information given on mileage record chart
			323	Enter information given into an automobile maintenance record form	325	Plan travel arrangements for meeting using flight schedule
325	328	State in writing an argument made in lengthy newspaper article	342	Identify the correct percentage meeting specified conditions from a table of such information	331	Determine correct change using information in a menu
	347	Explain difference between two types of employee benefits	352	Use bus schedule to determine appropriate bus for given set of conditions	350	Using information stated in news article, calculate amount of money that should go to raising a child
	359	Contrast views expressed in two editorials on technologies available to make fuel-efficient cars	352	Use table of information to determine pattern in oil exports across years	368	Using eligibility pamphlet, calculate the yearly amount a couple would receive for basic supplemental security income
	362	Generate unfamiliar theme from short poems				
	374	Compare two metaphors used in poem				
375	382	Compare approaches stated in narrative on growing up	378	Use information in table to complete a graph including labeling axes	382	Determine shipping and total costs on an order form for items in a catalog
	410	Summarize two ways lawyers may challenge prospective jurors	387	Use table comparing credit cards. Identify the two categories used and write two differences between them	405	Using information in news article, calculate difference in times for completing a race
	423	Interpret a brief phrase from a lengthy news article	395	Using a table depicting information about parental involvement in school survey to write a paragraph summarizing extent to which parents and teachers agree	421	Using calculator, determine the total cost of carpet to cover a room
500						

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

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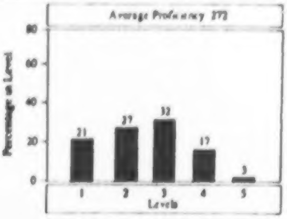
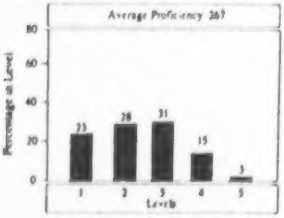
DISPLAY #4

Literacy Levels and Average Literacy Proficiencies for the Total Population

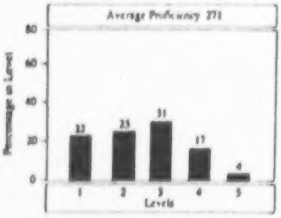
PROSE



DOCUMENT



QUANTITATIVE



Level 1 (0 to 225) Level 2 (226 to 275) Level 3 (276 to 325) Level 4 (326 to 375) Level 5 (376 to 500)

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

EDUCATION LEVEL SUBPOPULATIONS	PROSE SCALE		Level 1 225 or lower	Level 2 226 to 275	Level 3 276 to 325	Level 4 326 to 375	Level 5 376 or higher	Overall Proficiency
	n	WGT N (/1,000)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	PROF (SE)
Education Level 1								
Still in high school	973	8,268	16 (1.8)	36 (2.7)	37 (2.8)	11 (1.9)	0† (0.3)	271 (2.0)
0 to 8 years	2,187	10,358	75 (1.7)	20 (1.4)	4 (0.9)	0† (0.3)	0† (0.0)	177 (2.0)
9 to 12 years	3,311	24,982	42 (1.4)	38 (1.1)	17 (1.0)	2 (0.4)	0† (0.1)	231 (1.5)
GED	1,082	7,224	14 (1.8)	39 (2.9)	39 (2.8)	7 (1.2)	0† (0.6)	268 (1.8)
High school	6,107	51,290	16 (0.8)	36 (1.3)	37 (1.7)	10 (0.9)	1 (0.2)	270 (1.1)
Some college (no degree)	6,587	39,834	8 (0.5)	23 (0.8)	45 (0.9)	22 (0.8)	3 (0.3)	294 (1.0)
2 year college degree	1,030	8,831	4 (1.1)	18 (2.3)	41 (2.9)	32 (2.5)	4 (0.9)	308 (2.4)
4 year college degree	2,534	17,804	4 (0.7)	11 (1.3)	35 (2.0)	40 (1.5)	10 (1.3)	322 (1.8)
Graduate studies/degree	2,253	16,308	2 (0.4)	7 (1.0)	26 (1.4)	47 (1.8)	18 (1.1)	336 (1.4)

EDUCATION LEVEL SUBPOPULATIONS	DOCUMENT SCALE		Level 1 225 or lower	Level 2 226 to 275	Level 3 276 to 325	Level 4 326 to 375	Level 5 376 or higher	Overall Proficiency
	n	WGT N (/1,000)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	PROF (SE)
Education Level 1								
Still in high school	973	8,268	15 (1.5)	35 (2.3)	38 (2.6)	12 (1.5)	1 (0.8)	274 (1.8)
0 to 8 years	2,187	10,358	79 (1.7)	18 (1.6)	3 (0.8)	0† (0.1)	0† (0.0)	170 (2.4)
9 to 12 years	3,311	24,982	46 (1.7)	37 (1.6)	15 (1.3)	2 (0.4)	0† (0.1)	227 (1.6)
GED	1,082	7,224	17 (2.0)	42 (2.7)	34 (2.3)	7 (1.1)	0† (0.5)	264 (2.2)
High school	6,107	51,290	20 (0.8)	38 (1.0)	33 (1.1)	8 (0.6)	1 (0.2)	264 (1.1)
Some college (no degree)	6,587	39,834	9 (0.4)	27 (0.8)	42 (1.0)	20 (0.8)	2 (0.4)	290 (0.9)
2 year college degree	1,030	8,831	6 (1.4)	23 (2.0)	43 (2.6)	25 (2.7)	3 (0.9)	299 (2.8)
4 year college degree	2,534	17,804	4 (0.5)	15 (1.3)	37 (1.5)	36 (1.2)	8 (1.2)	314 (1.4)
Graduate studies/degree	2,253	16,308	3 (0.6)	10 (0.9)	34 (1.6)	41 (1.9)	12 (1.1)	326 (1.6)

EDUCATION LEVEL SUBPOPULATIONS	QUANTITATIVE SCALE		Level 1 225 or lower	Level 2 226 to 275	Level 3 276 to 325	Level 4 326 to 375	Level 5 376 or higher	Overall Proficiency
	n	WGT N (/1,000)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	RPCT (SE)	PROF (SE)
Education Level 1								
Still in high school	973	8,268	19 (1.7)	35 (3.0)	32 (2.3)	12 (2.0)	1 (0.8)	268 (2.2)
0 to 8 years	2,187	10,358	76 (2.0)	18 (1.8)	5 (1.1)	1 (0.3)	0† (0.2)	169 (3.1)
9 to 12 years	3,311	24,982	45 (1.6)	34 (1.6)	17 (1.3)	3 (0.6)	0† (0.1)	227 (1.7)
GED	1,082	7,224	16 (2.0)	38 (2.5)	35 (2.5)	10 (1.4)	1 (0.5)	268 (2.7)
High school	6,107	51,290	16 (0.8)	33 (1.1)	37 (1.1)	12 (0.5)	1 (0.2)	270 (1.1)
Some college (no degree)	6,587	39,834	8 (0.6)	23 (1.2)	42 (1.4)	23 (1.3)	4 (0.4)	295 (1.6)
2 year college degree	1,030	8,831	4 (0.8)	19 (2.0)	43 (2.0)	29 (2.7)	6 (1.3)	307 (2.8)
4 year college degree	2,534	17,804	4 (0.5)	12 (1.0)	35 (1.4)	38 (1.4)	12 (1.1)	322 (1.2)
Graduate studies/degree	2,253	16,308	2 (0.5)	9 (0.8)	30 (1.4)	42 (1.7)	17 (1.4)	334 (1.3)

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n = sample size; WGT N = population size estimate / 1,000 (the sample sizes for subpopulations may not add up to the total sample sizes, due to missing data). RPCT = row percentage estimate; PROF = average proficiency estimate; (SE) = standard error of the estimate (the reported sample estimate can be said to be within 2 standard errors of the true population value with 95% confidence).

† Percentages less than 0.5 are rounded to zero.

Source: U.S. Department of Education, National Center for Education Statistics, National Adult Literacy Survey, 1992.

students are adequately prepared for the workforce? This question will evoke several answers Clearly, the 16 percent of high school completers who were in level 1 were not well prepared

The *America's Choice: High Skills or Low Wages* report cited above, after noting there was no skills shortage, proceeded to project a hypothetical skills shortage If American companies moved to high performance workplaces, there would be a shortage of persons with the advanced skills required The report urged American educational reform to pave the way for this kind of change in the workplace by better addressing the needs of the non-college bound — currently described as "the forgotten half" Whether there is a present or imminent skills shortage or not, there is widespread agreement that the way to improve our education system is to create an educational program and a recognition/rewards system that will reach this forgotten half

The college-bound students have an excellent program, effective guidance, and a recognition/reward system The non-college bound, including those who at the last minute decide to try college and then drop out have no socially valued program and no avenue for recognition for their work in schools Below, we will propose a practical approach to this problem in which small business can play major role

How would you characterize America's vocational educational system? Does it adequately prepare America's students?

Vocational education does not reach significant numbers of America's students Fewer than 10 percent of 11th grade students reported taking more than

2.5 courses/years of vocational education, according to a 1989 report by the ETS Policy Information Center entitled, *What Americans Study*. Vocational education suffers from a "prestige deficiency" and has difficulty attracting students.

At the same time, the vocational educational leadership is responsible for a remarkable change — a move away from traditional voc. ed.'s focus on job-specific skills toward a core curriculum in technical literacy called Applied Academics. These courses are so named because they present significant subject matter in learning materials that integrate a particular academic discipline (such as mathematics, science, or English) with modern workforce applications (hands-on laboratories dealing with practical equipment and devices). In the Applied Academics courses, a careful balance of "head skill" and "hand skill" learning is developed. The application-oriented context and hands-on components have been proven to be vital elements in reaching and attracting students who would otherwise tend to shy away from such demanding content.

Applied Academics grew out of a fundamental re-thinking of vocational education which identified rigorous basic technical literacy in math, science, and communication skills as essential for all vocational preparation, including the retraining of adult workers. This re-thinking, as illustrated in the graphic shown below, concluded that specialized training with specific tools and techniques — without a foundation in technical literacy — puts students on a short road to obsolescence. Applied Academics provides the grounding in technical literacy that makes further specialized training and periodic retraining feasible.

While this program of Applied Academics was initiated by a consortium of vocational educators representing some 49 states, the program itself is designed to serve the majority of high school students including both college-bound and non-college-bound students. It is especially tailored to reach the "forgotten half" without requiring students to make any early decision about college or employment. For example, the consortium's Principles of Technology course (Applied Physics) is accepted as a pre-college lab course by such institutions as MIT and Georgia Tech.

Applied Academics courses introduce major and urgently needed changes in the high school classroom -- changes that have already proven successful in reaching and teaching students who would not be reached by the traditional approaches. These changes include the following:

- Content is presented with immediate application and "hands-on" use within the classroom.
- "Concrete" thinkers with good hand skills can succeed alongside "abstract" thinkers with good head skills.
- "Math labs" are introduced to help learners master mathematics needed in the workplace.
- "Physics labs" are directed toward applications of concepts on realistic work place devices (as opposed to "revalidating" long established principles).
- Video materials emphasize role models and applications of mathematics, science and communication in real jobs in the work force/private sector.

The Principles of Technology course received the top rating for technical physics in a review journal of the American Association for the Advancement of Science. (Applied Physics is called "Principles of Technology" to avoid the term "physics" which might intimidate students in the target group.)

As I see it, Applied Academics is both the precursor and centerpiece of a new high school curriculum designed to serve the mainstream (40-50 percent) of students who fall between those seeking job-specific vocational education and those in a college preparatory program.

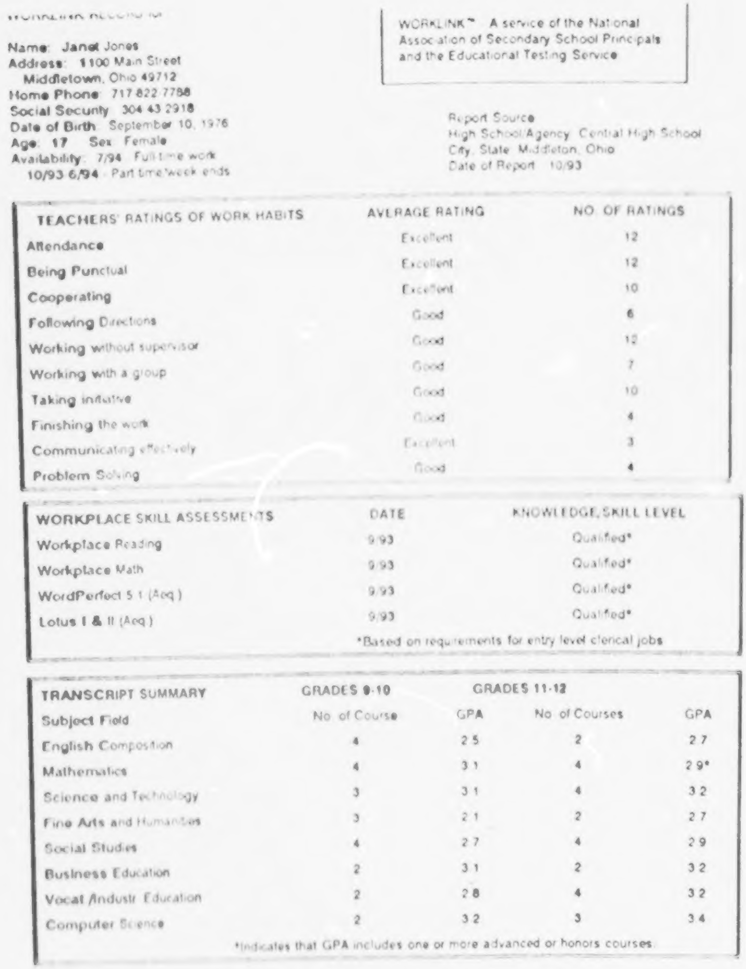
What can be done to improve the U.S. school-to-work transition system?

Much of the attention by foundation and government is directed to work-based learning and on the job training — faint echoes of the German apprenticeship tradition. I see widespread use of work-based learning as Step Two, which will take many years to accomplish. As the recent GAO report has noted, work-based learning is viewed as more low status voc ed. I believe we need to begin with Step One. Before we can create a system in which business and industry are integrally involved in training, we need to involve them in a less demanding role — that of recognizing and rewarding learning. At present, what students do in school does not count in the workplace. To make matters worse, students know this and perform accordingly.

As a beginning step in addressing the school-to-work transition, action needs to be taken on both sides of the school-to-work equation. Business and industry must begin to recognize and reward school performance. U.S. high schools must acknowledge that the present academic transcript designed for college and university registrars will not serve employers. They must put in place an employer-friendly school-to-work record system. The National Association of Secondary School Principals (NASSP) is currently implementing an employer-friendly electronic school-to-work record system, building on pioneering work done by the Educational Testing Service. In a recent NASSP survey, over 80 percent of the responding principals agreed that their students need the opportunity to build a school-to-work record. These principals saw such record-building as motivating youth, who now lack incentives to do well in school, and agreed that such records would make school performance count in the workplace. Employer-friendly school-to-work transition records would help businesses and especially small businesses take the first step in recognizing and rewarding relevant school performance.

The NASSP/ETS school-to-work record system is called WORKLINK™. WORKLINK™ is a computer-based student record system that generates an employer-friendly record that gives employers the information they want and need to make sound hiring decisions (see Display #6). At the heart of the system is a database of high school students' records maintained by an employer organization such as a Chamber of Commerce that can be accessed by employers during the hiring process.

WORKLINK™ encourages high school students to begin building their records to obtain part-time and summer jobs as well as full-time work after graduation. The WORKLINK™ software contains a guidance component to assist students in developing their records. The WORKLINK™ record encourages students to develop



WORKLINK RECORD for

Name: Janet Jones
Address: 1100 Main Street
Middletown, Ohio 49712
Home Phone: 717 822 7788
Social Security: 304 43 2918
Date of Birth: September 10, 1976
Age: 17 **Sex:** Female
Availability: 7/94 Full time work
10/93 6/94 - Part time/week ends

WORKLINK™ A service of the National Association of Secondary School Principals and the Educational Testing Service

Report Source
High School/Agency: Central High School
City, State: Middleton, Ohio
Date of Report: 10/93

TEACHERS' RATINGS OF WORK HABITS	AVERAGE RATING	NO. OF RATINGS
Attendance	Excellent	12
Being Punctual	Excellent	12
Cooperating	Excellent	10
Following Directions	Good	6
Working without supervisor	Good	12
Working with a group	Good	7
Taking initiative	Good	10
Finishing the work	Good	4
Communicating effectively	Excellent	3
Problem Solving	Good	4

WORKPLACE SKILL ASSESSMENTS	DATE	KNOWLEDGE/SKILL LEVEL
Workplace Reading	9/93	Qualified*
Workplace Math	9/93	Qualified*
WordPerfect 5.1 (Acq.)	9/93	Qualified*
Lotus I & II (Acq.)	9/93	Qualified*

*Based on requirements for entry level clerical jobs

TRANSCRIPT SUMMARY	GRADES 9-10		GRADES 11-12	
Subject Field	No. of Course	GPA	No. of Courses	GPA
English Composition	4	2.5	2	2.7
Mathematics	4	3.1	4	2.9*
Science and Technology	3	3.1	4	3.2
Fine Arts and Humanities	3	2.1	2	2.7
Social Studies	4	2.7	4	2.9
Business Education	2	3.1	2	3.2
Vocat./Industr. Education	2	2.8	4	3.2
Computer Science	2	3.2	3	3.4

*Indicates that GPA includes one or more advanced or honors courses.

JOB-RELATED COURSES	END DATE	PORTFOLIO/CHECKLIST* (Y/N)
Advanced Keyboarding	6/92	Yes
Content/Skill Learned: Wordperfect, Lotus		
Business Writing	6/92	Yes
Content/Skill Learned: writing and proofreading correspondence, memos, project reports		
Computer Graphics	12/91	Yes
Content/Skill Learned: Harvard Graphics		
Bookkeeping	6/91	Yes
Content/Skill Learned: Bookkeeping, Accounting Software		

*Available for employers at interview or upon request.

OTHER EDUCATION AND TRAINING	DATE	PLACE	REFERENCES
Lifeguard Training	7/89	YMCA	Paul Evans 717/427-4201
Content/Skill Learned: First aid, safety, CPR			
Nurse Assistant Training	6/88	Red Cross	Jane Drew 717/423-5570
Content/Skill Learned: Patient care, interpersonal skills			

WORK EXPERIENCE	DATE	PLACE	REFERENCES
Retail Sales — Clothing	8/89-8/90	Fashion Place	Lucy Montgomery 717/422-5436
Tasks Involved: Waiting on customers, checking inventory, use of cash register/bar codes			
Restaurant — Waitress	6/88-8/88	Blue Heron Cafe	Barbara Stowe 717/456-3331
Tasks Involved: Waiting on customers, cash register use			
Volunteer Work	6/87-8/87	Mercy Hospital	Doreen Clarke 717/478-9999
Tasks Involved: Delivering mail, running errands			

AWARDS, HONORS, AND COMMENDATIONS	DATE	SOURCE	REFERENCES
Community Service Award	6/89	Kiwanis	Charles Grimes 717/424-2020
Recognized for: Work on Food for the Homeless Project			
Class Treasurer	6/88	Central High School	Helen Newton 717/423-5575
Recognized for: Leadership in school activities			
Yearbook Advertising	89	Central High School	Barbara Hoffman 717/423-4242
Recognized for: Obtaining 10 ads			

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good work habits because it includes teacher ratings of work habits, similar to those in the SCANS report, which are important to employers

WORKLINK™ requires the cooperation of high schools, the business community, and the students. High schools help students develop their WORKLINK™ records. Business organizations recruit employers and provide the regional database of student records. Students use their WORKLINK™ records to find a job in two ways: 1) Student WORKLINK™ records are compiled in a database that employers can search for potential hires who meet specific criteria, and 2) Students can get printouts of their records to take to interviews. Employers can also use the system to verify the authenticity of WORKLINK™ records presented by students

In many ways, WORKLINK™ is tailored to small businesses, which have more difficulty recruiting and screening potential employees. WORKLINK™ will give small businesses a way to influence and motivate students and improve local schools. In a very direct way, small businesses can set local standards by the criteria they use in searching the WORKLINK™ database. Schools and students will in turn be guided by this information from the WORKLINK™ system

Small businesses hire 80 percent of the students out of high school. What is the economic cost to small businesses of a poorly or inadequately educated workforce?

The kind of economic analysis required by this question falls outside the expertise of our organization

In a report entitled *Training to be Competitive*, our Policy Information Center, however, did summarize recent trends in the training of the workforce, which would relate to the economic costs of poor workforce preparation. In general, the report notes an emphasis on training the already better educated.

- Two out of five workers employed (41 percent) in 1991 received skill-improvement training, an increase from 35 percent in 1983. The gains were concentrated in the 35- to 54-year only group. Only 18 percent of 16- to 19-year-olds received skill-improvement training.
- Workers who already had the most education were the ones who got the most skill-improvement training on the job. This gap by education level widened from 1983 to 1991.
- "Frontline" workers received just 17 percent of the skill-improvement training, down from 22 percent in 1983. Executive, professional, and technical workers received the most training to improve their skills.
- One in three American workers received neither training to qualify for the job they hold nor training to improve their skills, and three in ten received both. Half of frontline workers, such as machine operators, assemblers, inspectors, transportation and material movers, received neither; about one in seven received both. The story was similar for service workers.
- While informal, on-the-job training has historically been the largest source of skill-improvement training, formal company training programs pulled even with them in 1991, and these formal programs were longer in duration.
- Skill-improvement training for employed workers was about the same for

males and females, and was higher for White workers than for minorities

- Fifty-seven percent of people employed in 1991 said they needed training to qualify for their jobs, about the same as in 1983, when 55 percent needed training.
- Just one in four employed 16- to 19-year-olds said they needed training to qualify for their jobs, as did just under half of 20- to 24-year olds.

As you look into the future of American business, what are the challenges facing small businesses in the training of new employees and upgrading the skills of currently employed workers?

If small businesses would support and actively use information system such as WORKLINK™, they would go a long way to solving their training problems. When an employer uses WORKLINK™ in a search for potential employers, students, schools or training organizations will get specific information on what employers are looking for. This information will shape the interest of students and school staffs. As these systems evolve with more and better information, schools and training companies will better serve the needs of small employers. Right now, the needs of small employers are difficult to define and address.

Are standardized test scores an appropriate measure of America's educational performance?

The answer is yes. If we change the text to read "assessments" in place of "test scores," the answer is a more emphatic yes. Assessments include scoring performances of hands-on exercises, math problems, written pieces, oral presentations, work samples, etc. Standardization does not mean only multiple-choice tests with gridded-in answers, it means performance of any kind done under standard conditions and scored by standard rules. Without such standardization, the scores or results from any assessment are not interpretable.

Let me mention four kinds of standardized assessments with which we at ETS are currently involved.

- **Computer adaptive testing for placement in training programs.** Students take these tests on a micro-computer. As each answer is given, the test is continually shaped to match the examinees' level of performance. These adaptive tests give better information and take about one-third of the time usually required -- with less frustration to the examinee.
- **Advanced Placement Tests.** High school students take these tests for college credit. These tests represent national benchmarks for excellence in 16 fields, as varied as studio art, biology, government and politics, French language and literature, psychology, economics, chemistry, computer science, music, and calculus. They combine multiple-choice questions with constructed response exercises.
- **Scaled performance exercises** in adult literacy, as reported above. These are standardized exercises in which examinees perform tasks under controlled conditions.
- **Computer-based performance tests** on the use of WordPerfect and Lotus software with certification/credentials developed in cooperation with Olsten Temporary Services.

I cite these as examples of some the varied forms of standardized assessments that will help both employers and educators accurately gauge the skills of the American workforce.

To summarize, I note the following points

- Whatever may be the extent of our present skills shortage, there is a clear need to improve U.S. secondary education to address the needs of the forgotten half.
- What is needed is a new mainstream high school program expanding on the applied academics approach that is not under the voc. ed. flag.
- A school-to-work information system including interpretable skill assessments is needed to make school performance count in the workplace.
- The technology for valuable standardized assessments of educational performance is available — and expanding; this is no time to embrace non-standardized assessment procedures.

Council on Competitiveness

THE DEVELOPMENT OF RURAL ENTERPRISES, EXPORTS AND THE ENVIRONMENT

Testimony of

HOWARD D. SAMUEL

Senior Fellow

Council on Competitiveness

before the

SUBCOMMITTEE ON DEVELOPMENT

of

RURAL ENTERPRISES, EXPORTS, AND

THE ENVIRONMENT

of the

COMMITTEE ON SMALL BUSINESS

UNITED STATES HOUSE of REPRESENTATIVES

September 21, 1993

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(202) 785-3990 • FAX (202) 785-3998

My name is Howard D. Samuel, and I am here to represent the Council on Competitiveness, a coalition of business, labor and academic leaders, formed in 1986, to follow up on the recommendations of the federal President's Commission on Industrial Competitiveness. From the Council's founding until last year, I served as a vice chairman, representing labor. For the past year, since my retirement as president of the Industrial Union Department (AFL-CIO), I have served the Council as a senior fellow, helping to develop its policy positions on workplace and workforce issues.

The Council's membership includes a wide variety of businesses, many of them large, a number of them medium and small. What characterizes all of them is an understanding of the growing challenges posed by global competition and a desire to meet those challenges by improving their productivity with the support of an enlightened partnership of the public and private sectors.

There is no question in our minds that a critically important key to improved productivity is a skilled workforce. This factor applies at all levels and in all sectors of business, regardless of size. The question that this committee raises, however, is an important one: do the requirements of small business differ from those of large business?

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The Council on Competitiveness, in approaching the problem of workforce preparedness, in most respects did not raise the issue of business size. (The council's report, Elevating the Skills of the American Workforce, is available to members of the Committee.)

We started with the recognition that a high percentage of high school graduates do not possess the reading or mathematical capabilities necessary to obtain and keep decent, skilled and well-paying jobs, and that the fact that a large number of youth drop out of high school before graduating only compounds the problem.

As a result, non-college bound youngsters in this country rank among the least prepared to work of those in any advanced nation--which certainly affects the ability of American business, of any size, to equip itself with the workforce it needs.

In recent years, a number of reports have pointed out that in addition to the inadequasies of our K-12 education system, the nation also suffers from our failure to provide a national system of skills standards against which we can measure the effectiveness of our educational efforts; the abence of a systematic transition from school-to-work for the non-college bound; the lack of attention paid and resources committed by American management to elevating the skills of the existing workforce; and the ad hoc approach government has taken to provide support and training to workers who have lost their jobs.

We believe that if the nation is to deal effectively with the issue of workforce development, it must start at the earliest possible age--Head Start programs at age 3, for example--and continue throughout the worker's life on the job--or more likely in this period of changing technology and markets, a number of jobs.

All of the workforce issues are inextricably linked. Developing a system of occupational standards is the foundation of a more effective program to prepare non-college bound youth for the world of work--and both efforts are necessary if on-the-job training is to succeed--and all three needs must be met if we are to do better in retraining workers who have lost their jobs.

As we put these programs in place improved governmental structures at the federal and local level must be created to coordinate and encourage participation. It is also widely agreed that the private sector must play a vastly enlarged role if we are to upgrade the skills of the U.S. workforce to meet the needs of industry.

But, as important as all this, is American management's commitment to improve the processes by which it provides goods and services to the nation and to the world. Too many companies remain wedded to processes that ignore the demands for quality and customization made by increasingly sophisticated and diverse consumers. These companies are failing to take advantage of new, enabling technologies and the potential capabilities of their workers.

The question this committee asks is whether small business has special needs which require a special response as we develop the programs I have suggested.

Small business, by definition, does not have the resources enjoyed by larger firms to overcome the problems posed by an inadequately prepared workforce. So for small business, the need for more effective public programs could be said to be even more critical than for larger firms, which have the resources to establish their own. We would hope, therefore, that as this Administration and Congress initiate programs, such as Goals 2000: Educate America Act in respect to the nation's educational systems--including a provision for the development of skills standards--and such as the newly introduced School-to-Work Opportunities bill, that small business and organizations representing small business will demonstrate their strong support.

Small business will be proportionately the largest gainer.

Small business also has a special stake in a joint public-private effort to improve the processes used to provide goods and services in every sector. The goal has been described in varied terminology: lean production, high performance production, agile manufacturing. These new systems are important not only to the manufacturing sector, but also to the services--where small business is a major factor--which now employ most of the nation's workers and provide an important share of our export income.

In this area, government already is in the early stages of providing help to small and medium size business through the manufacturing technology centers, administered by the National Institute of Science and Technology. I would hope that small business will also show its support for an expansion of this program--in support of the Administration's objectives--which can do so much to help improve the nation's productivity and our ability to compete in world markets.

Finally, small business has a special problem in respect to the continued training of workers on the job. Small business often does not have the resources to carry out its own ongoing programs, and even if it does, there is reluctance to commit them when the workers with needed skills are "poached" by competitors--who may find it cheaper to pay more to workers trained by others than to do the training themselves. Such "poaching" is a zero-sum game, of course, but in our democratic society there doesn't seem to be a way to prevent it.

A number of proposals have been advanced to provide incentives to companies to carry out their own ongoing training programs, ranging from instituting a training tax on companies that fail to dedicate a modest percentage of payroll to training, to providing a tax credit to compensate business in part for its investment in training.

I do not see any evidence of consensus on these proposals, either in the labor or business community or in any branch of government. But the Council on Competitiveness believes that encouraging or assisting the private sector to greatly increase its investment in training--particularly of front-line workers--is critically important if America is to remain competitive with other industrial nations and improve its standard of living.

TESTIMONY OF

STEPHEN B. FRIEDHEIM
PRESIDENT
EXECUTIVE SECRETARIAL SCHOOL
DALLAS, TEXAS

BEFORE THE
U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON THE DEVELOPMENT OF
RURAL ENTERPRISES, EXPORTS AND THE ENVIRONMENT
OF THE
COMMITTEE ON SMALL BUSINESS

HEARINGS ON THE
EDUCATION OF THE SMALL BUSINESS WORKFORCE

THE HONORABLE BILL SARPALIUS
CHAIRMAN

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TESTIMONY
OF
STEPHEN B. FRIEDHEIM

BEFORE THE SUBCOMMITTEE ON THE DEVELOPMENT OF RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT OF THE COMMITTEE ON SMALL BUSINESS OF THE U. S. HOUSE OF REPRESENTATIVES ON SEPTEMBER 21, 1993.

I am Stephen B. Friedheim, President of Executive Secretarial School in Dallas, Texas. Thank you for inviting me to testify today on a subject of great importance: the adequate preparation of students for employment by small businesses.

The Committee is to be complimented for undertaking these hearings because the more we discuss this topic and the more people we draw into these discussions, the more likely we are to sensitize the public as to the seriousness of the situation, and the more likely we are to find appropriate solutions, which are badly needed by our country.

I am here today representing the United States Chamber of Commerce where I serve as an advisory committee member of the Chamber's Center for Workforce Preparation. The Center has been involved in numerous activities in recent years related to education, to training, and to workforce preparation. Taken together, the Chamber and the Center represent 215,000 corporations, 3,000 state and local Chambers of Commerce, and 200 trade associations. Over 90% of the Chamber's corporate members are employers of 100 or less employees. To that end the Chamber has a vested interest in finding solutions that will help their thousands of small business members become more efficient.

In addition I currently serve as the Chairman of the Board of the Career College Association, a national organization with over 1,600 member institutions, which train and educate people to qualify for entry-level jobs in career fields from auto mechanics to X-ray technicians. For years I have been an active member of the American Vocational Association which is the national organization that represents over 40,000 members in all types and in all levels of vocational/technical education.

The subject of this hearing is very close to my heart because, as an educator at the postsecondary level, I am painfully aware of the inadequacies of too many students who possess a high school diploma. When these students enroll in our college, we are faced with problems very similar to small businesses who attempt to hire such students directly out of high school. When high school graduates lack adequate communication skills--written or spoken, when they have difficulty comprehending a mathematics concept containing fractions, and when they have no appreciation for the minimum employment standards in the real world of work, institutions like ours and small business employers alike have major tasks before them.

In order to respond to the several questions your invitation contemplates, let me set the stage for my testimony. These comments and suggestions have been based on more than twenty years of experience in vocational/technical education at the postsecondary level. Our school, which prepares people to be office professionals, has a current enrollment of over 650 students from all over Texas, Arkansas, and Oklahoma. (In the past year, Mr. Chairman, we have enjoyed the opportunity of enrolling about 100 students who traveled from your home district around Amarillo to participate in our programs in Dallas.)

These students can select a curriculum at our school, which leads either to a diploma or an associate of applied science degree in Office Administration. The vast majority have opted for the longer more intensive course leading to an associate degree, which includes not only the technical courses needed to effectively serve as an administrative assistant or secretary but also general education courses, which broaden an individual's knowledge of philosophy, English composition, calculus, public speaking, economics, and American government.

It is important to realize that we added the associate degree program because that is what small business owners told us they preferred their office professionals to have. Our annual surveys show that if technical skills are required by employees, small businesses cannot currently expect to get enough qualified prospects through the secondary school system.

And beyond that they told us that a high school education, however good it might be, was not enough; as a matter of fact a year's technical program beyond high school wasn't enough to effectively function on the job; the employment preference is for an associate degree with a strong technical component.

Let's look for a minute at the world of small business. (I can testify to this because our institution is a small business--a tax-paying institution commonly known as a private career college--with fewer than 100 faculty and staff.) As astonishing as it may be, it is estimated that small businesses create more new jobs in America than all of the Fortune 500 companies combined. And while that is important to know, it is even more important to realize that these very same companies do not have training departments. They put all of their resources into production, new product development, marketing, and delivery. To create a training department would require that they cut back in one or more of the departments that make the company profitable.

This means that any applicant they hire must be equipped with the necessary basic skills to function on the very first day. Small businesses cannot invest in weeks of training to get the employee ready to work. New employees are expected to learn the unique characteristics of the particular business on-the-job while doing what needs to be done. In order to do this, a prospect must possess a sufficient level of knowledge, skill, and desire to make the adaption to meet specific job requirements. In other words they must have a solid foundation of good old "reading, writing, and 'rithmatic" plus the necessary "ready to work" attitude in order to succeed.

We have noted that although students come to us with a high school diploma that does not mean that they can read at the twelfth grade level. College texts are written at the eighth and ninth grade level. The average high school graduate in Texas reads at the sixth grade level. So, when students have a low reading comprehension skill, they consequently have a great deal of difficulty coping with college level work.

Likewise, because of this reading deficiency, companies using technical manuals to support personnel required to perform with special or computerized systems must be extremely conscious of the reading level of the material contained in the manuals they use.

With this as background then, let me respond to your specific questions.

1. Does the American educational system adequately prepare

students for today's work force? Please offer any suggestions to improve our educational system.

Assuming that this question relates to America's "secondary" educational system, based on all of the surveys I have seen, which asked employers to answer this question, the answer is all too often "no."

A report issued earlier this month by the U. S. Department of Education entitled, "Adult Literacy in America," perhaps contains the most graphic picture of the problem by noting that nearly half of all adult Americans read and write so poorly that it is difficult for them to hold a decent job. This translates to 90 million Americans.

The examples they use to describe the problem include the fact that one of the most difficult tasks half of all adults can perform are using a calculator to figure a price difference of two items and filling out a Social Security form. These same 90 million people cannot write a brief letter explaining a problem, nor successfully use a bus schedule to discover departure times, nor determine the difference between a sale price and a regular price.

Another part of the problem our country has about jobs and education is our lack of appreciation for the whole picture of who goes to college and who graduates, when. It might better be described as the myth of the "Great American Dream." Much effort is given to promoting the "American Dream" in this country. The "Dream" is of graduating from college, getting a baccalaureate degree, which will make you successful on the job. Too many high schools spend more of their resources responding to this objective than any other. It is not unusual for school districts to measure their high schools for success by the number of students sent "on to college" meaning to the state university or college system.

At the same time vocational/technical education is given less attention; and in too many places schools fail to recognize and serve the needs of other students who do not have plans to "go on to college."

Let's look more closely at the "American Dream" and see what the "American Reality" is.

First, the Center for Educational Statistics reports that 6 percent of all high school students drop out (higher in urban areas and higher with minority populations);

Second, of the 96 percent who graduate, 50 percent enroll in a traditional 4-year college program;

Third, of this number only 50 percent ultimately graduate from a 4-year college program.....after six years.

How does this translate into real numbers:

Of every 1,000 high school students, 40 drop out; of the 960 who graduate, 50 percent or 480 enroll in a traditional 4-year program; of the 480 who enroll in a 4-year program, 50 percent or 240 graduate after six years. So, only 240 of every 1,000 achieve the "American Dream"....that is the "American Reality." Perhaps we should be spending more time and resources dealing with the 760 students out of every 1,000 enrolled in high school who will not complete a 4-year college program but will have to seek and find meaningful employment somewhere.

It has been estimated that many school districts spend 75 percent of their resources on the 25 percent of the student population who ultimately succeed in earning a traditional college degree.

In addition what does the U. S. Department of Labor's Bureau of Labor Statistics tell us about the job market? Two very important things:

One, 70 percent of the jobs in America by the year 2000 and beyond will require some technical education beyond high school but not a traditional 4-year college degree.

Two, every person must be prepared to change careers between 5 and 7 times during their lifetime. Please note that they said "careers" not "jobs." That calls for very fundamental retraining.

What this says is that our high schools and postsecondary colleges and schools should be combining more effectively to meet the job requirements of tomorrow; and everyone needs to realize that in a

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rapidly changing job market which is becoming more technologically sophisticated continuous training and retraining are a must.

If we are to improve our secondary education system we must first recognize and accommodate the realities of the job market. Put more of our resources and emphasis on preparing for employment rather than preparing for a traditional 4-year college degree which most students won't pursue, nor achieve, and which most employers don't require.

Next secondary schools must put more emphasis on the basic skills needed in every job: a solid grounding in the 3 R's with a special appreciation for job performance skills every employer requires, such as coming to a job prepared to work, dressing properly, showing up on time, staying the entire day, and demonstrating proper work behavior.

We need to create a recognition of the dignity of work in students' concepts of life after high school. Rather than holding up the achievement of the baccalaureate degree as the only noble objective upon high school graduation, students should learn in the earliest grades that everyone must work doing something and working at some worthwhile task, is in its own way making a contribution to society. In short there is a dignity in work.

This country desperately needs quality oriented workers in a host of career fields in order to function effectively. Auto mechanics must understand the increasingly complex technical components of the new engines in order to keep today's cars running efficiently. Secretaries must have a knowledge of and an appreciation for their computer's capabilities in order to keep a office running smoothly.

American youth are too often chided to improve themselves with remarks that stigmatize worthwhile careers. For example, have you heard someone say to a young woman, "You know you can be anything you want today; you don't have to be a secretary!" Or to the young man who really enjoys tinkering out back on his father's car, "Son, are you going to grow up to be greasy auto mechanic; haven't you got any ambition?"

These kind of expressions tend to denigrate legitimate careers without which our country would grind to a halt. We must work to put vocational/technical education on a par with other educational objectives for it to be viewed as equally important.

2. How would you characterize American's vocational educational system? Does it adequately prepare America's students?

It can be demonstrated that where vocational/technical education is provided with the appropriate funding and political support it can and does prepare America's students for the real world of work. If vocational education is not held on a par with secondary school programs that encourage preparation for traditional college enrollment, then it suffers from a lack of funding and identification.

Secondary schools should be reviewed by outcome measurements other than the number of students who go on to the state university. If these schools were measured by the number who gained employment following graduation, or who enrolled in a post-secondary technical program, or went to the university system following graduation, the school would work harder to meet this broader, more appropriate, student-oriented measurement objective.

3. What can be done to improve the U. S. school to work transition?

This is not as difficult a question as it might seem on the surface. I say this because the experience of America's accredited private career schools and colleges have been achieving remarkable results for many years. These institutions annually train 1.7 million students in careers as varied as computer graphics and pastry chef. We achieve a graduation rate of 66 percent and a placement rate of 75 percent, according to a study conducted this year by the Center on Education and Training for Employment of Ohio State University. Let me tell you how we do it by using our college as an example:

We begin with a clearly defined understanding of our mission: to prepare people for employment with the necessary skills and the proper attitudes in the shortest possible time using the finest equipment and the best faculty available.

These schools do not conduct research; we do not require our faculty to publish or parish; we do not employ teaching assistants to conduct classes; we do not take a laissez fare attitude about student participation--students must be in class every day. We have a dress code that requires that our students dress in an attire appropriate for the office.

Our curriculum is designed in conjunction with local advisory committees made up of employers, personnel managers, graduates, and office professionals who meet regularly to offer suggestions for improving the program. This process allows us to know instantly when the technology of the office is changing. We then make adjustments in the curriculum or buy new equipment or up-grade the software as the need dictates.

Our classes are small so that students can get the individualized attention they need to learn a technical skill. Our teachers are the best we can find. They have the teaching credentials required by accreditation and state oversight agencies, and they must also possess actual experience in the field, doing the things they are teaching. Our faculty are evaluated by both the administration and the students on an annual basis as a part of our compensation review program. Skill development and student perseverance or retention are both elements to be evaluated.

Our entire program from the day the student begins to the day they finish is designed to produce a graduate who can function effectively as an office professional. Students are reminded of this goal, over and over through every assignment and every course.

Students are given repeated opportunities and encouragement to visualize themselves working as an office professional. One way we stimulate this process is by regularly bringing graduates and employers into the classroom to supplement the daily instruction. Students are taken on a number of field trips during their program where major employers give them tours and counsel them on what they should expect to need when they go to work. This is an effective way to reinforce what the faculty teaches the students every day.

Employers are invited to special round-table lunches held throughout the year, where students can learn about the employment standards and working conditions in a variety of individual companies.

Our teachers are required periodically to go into the workplace to see how our graduates are doing on-the-job. This is a "reality check" on the accuracy of our instruction. We annually survey our graduates to insure that what they learned in the classroom is what they needed on-the-job.

Our college employs two full-time placement coordinators whose job it is to connect our graduates with employers seeking qualified applicants. It is the responsibility of the placement coordinators to cultivate the interests of personnel directors in the skills our graduates possess and to continually solicit input on changing employment requirements that can be institutionalized through our classroom presentations.

The placement coordinators are also responsible for teaching the students how to prepare for employment interviews. Students are even video-taped in mock interviews using actual human resource managers in the role of the interviewer. These tapes are reviewed and critiqued to help students improve their images and overcome the fear of the interviewing process, which is particularly traumatic for people interviewing for the first time.

Our college is measured by how many students graduate and of those that graduate how many become employed in the occupation for which they were trained. Having this measurement as a goal is a primary way to keep everyone--students and faculty/staff alike--focused on a specific objective.

Using this technique along with the various educational delivery characteristics would provide a major way to improve the school to work transition. Please note that it would be impossible for private career colleges like ours to achieve a meaningful goal in graduation and placement without the full participation of the business community. The time and advice provided by employers has been invaluable to our school's achievements.

It is important to ask small businesses to participate in the training process in ways that are compatible with the work that the company must perform to stay in business. For example, asking businesses to send representatives to give presentations in the classroom about the realities of the work world is one thing; asking them to provide internships where the intern receives supervised training and a salary is quite another.

It is unrealistic to think that many small businesses can enjoy the luxury of being able to afford to pay a non-productive employee while being trained. It is more likely that big business would participate, which is fine, except that it would still not serve the interests of the small businesses who could rightfully ask, "I'm paying taxes to support our public schools. Why can't they train people to be employable?"

4. Small businesses hire 80 percent of the students out of high school. What is the economic cost to small businesses of a poorly or inadequately educated work force?

While it may be impossible to place an actual dollar figure on the economic cost of a poorly educated work force, it can speculated that a lack of qualified applicants from which to choose significantly limits the ability of businesses to grow and develop as rapidly as they would like. The opportunity to expand into new markets or produce new products cannot be undertaken easily with employees that are not equipped educationally.

The rapidly changing technology being incorporated into nearly every occupation is particularly burdensome to small businesses who have difficulty retraining personnel while working at full capacity. If the current personnel lack a sufficient grounding in the basics, the problems of integrating new technology into the operation is extremely difficult.

The cost of recruiting personnel is an expensive and a time-consuming process. The lack of qualified applicants increases the cost tremendously. Bell Telephone reports that 50 percent of its entry-level employees are lost because they don't posses the working behavior skills to succeed. Can you imagine the costs involved in that?

The American Society for Training and Development has estimated that business and industry spend more money on training and retraining than is spent in all of higher education. Business and industry must do this because the qualified applicants are not available, or the necessary training is not being offered elsewhere. If the qualified applicants were available, those resources could be utilized to open new plants, engage in more research, increase personnel salaries, and hire more employees. This one area of savings alone could provide a significant boost to the entire American economy.

5. As you look into the future of American business, what are the challenges facing small businesses in the training of new employees and upgrading the skills of currently employed workers?

The challenges could be described through these questions in the voice of the small business community:

a. As a small business how can I continue to compete effectively in an ever-increasingly sophisticated marketplace without qualified employees?

b. How can I develop new products and expand my markets without qualified employees?

c. How can I afford to absorb the costs of training and retraining personnel who lack a sold grounding in the basic skills?

d. If I use my limited resources to undertake the training and retraining responsibility to enable someone to become or continue to be employable, will the government (state or Federal) help underwrite the costs or compensate my company with tax credits?

(A recent survey of professional corporate trainers supports this

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last point: Lakewood Research of Minneapolis surveyed trainers and found that nearly 70 percent said that tax breaks would boost their companies spending on training.)

The question of job-readiness is quite appropriately an item of concern for this Small Business Committee's hearing, as are the other hearings to be conducted on a variety of proposals dealing with this topic. I believe that the Administration's school to work initiative, for example, offers program models and funds to ensure a skilled workforce. Careful attention must be given to the appropriate inclusion of the small business community in this effort. The private sector of higher education should also be included. Students should continue to have the opportunity to select the training program that best suits their career objective wherever such a program may exist in the public or private sector. It seems clear that the private sector has developed some effective techniques to bring people to the workplace with employable skills which should be studied for inclusion in the public sector.

The challenges presented by an under-educated workforce are at the very heart of America's economic future. The solutions will come only from a dedicated effort of teamwork between educators, employers, and the government.

The educational delivery system must be reshaped with a clear objective in mind: serving the career development needs of all students. It was former Commissioner of Education Dr. John W. Gardner who said, "A society that does not pay equal attention to both its plumbers and its philosophers will soon find that neither its pipes nor its theories will hold water."

Thank you for the opportunity to participate in your deliberations.

THE EDUCATION IS ESSENTIAL FOUNDATION, INC.
A PROJECT OF
THE DALTON-WHITFIELD CHAMBER OF COMMERCE

The Education of the Small Business Workforce

Last week, newspaper headlines across the US announced the release of the National Adult Literacy Survey conducted by the US Department of Education. For those of us who work in workplace training issues, we knew the report was coming, and we dreaded what it would reveal. Our fears were well-founded: Nearly half of adult Americans read and write so poorly that they are unable to function effectively in the workplace. These 90 million people with poor literacy skills represent 47 percent of the nation's 191 million adults.

These data represent the single most significant challenge facing small businesses in the training of new employees and upgrading the skills of currently employed workers. If businesses employ workers who lack basic literacy and numeracy skills, even the most luxurious training budgets for quality improvements and technology upgrades will be money thrown down a black hole. Basic skills are exactly that: basic; fundamental. And if they are lacking, businesses small or large will find it difficult to remain viable and competitive in hometown America, not to mention in the global marketplace.

And a high school diploma is no guarantee of adequate literacy skills: NALS data indicate that more than half of the high school graduates were found to have restricted abilities in math and reading. Furthermore, the NALS Executive Summary reports that "literacy proficiencies of young adults assessed in 1992 were somewhat lower, on average, than the proficiencies of young adults who participated in a 1985 literacy survey."

Thus, it's painfully obvious that the American educational system does not adequately prepare students for today's work force. Business and management gurus predict that in the age of information and technology, we're all going to change jobs at least a half dozen times before we retire, so everybody is going to need to become a lifelong learner. And the re-engineering of American business is already flattening the organizational chart, so that high performance companies expect their workers to be flexible, able to work in teams, and take on more responsibility in making decisions and solving problems.

To this end, the US Department of Labor released the SCANS report last spring. "The Secretary's Commission on Achieving Necessary Skills: What Work Requires of School" identified the "Foundation Skill" areas as Basic Skills, Thinking Skills, and Personal Qualities, along with five "Competencies" that students/workers need to use productively in a high performance workplace. Yet in school rooms across America, we still have 30 little future workers sitting in straight rows, following instructions from a boss, and they can't even talk to each other until school's over.

So now we have the NALS report, a great source of data which can be used to draw undeniable conclusions regarding the state of literacy in America today and the SCANS report, which offers sound recommendations for addressing the crisis. The challenge now is to use these reports as a catalyst for revolution in American education and workforce training. As Education Secretary Richard Riley stated last week: "(The NALS Report) should be a wake-up call for all Americans..."

Clearly, the education crisis America faces today is tremendously complex. It may hit small businesses hardest, because they hire 80% of the students out of high school, yet have limited resources for formal workplace training programs. But based on our experience in Dalton, the best bet for businesses large or small on this employee training issue is to pool their resources to raise the overall education level of the entire community.

In Dalton, Georgia, we got our "wake-up" call a little early: Like 11 years early. Our entire community has wrestled with education problems for over a decade now, and we've been recognized repeatedly as a model for what can be accomplished when a community works collaboratively toward improving education levels across the board. Here's our story:

Dalton, Georgia, population 72,000, is "The Carpet Capital of the World". Seventy percent of the carpet manufactured in the United States is produced within a 50-mile radius of Dalton. Located 90 miles north of Atlanta in the northwest corner of Georgia and the foothills of Appalachia, Dalton was for decades a mecca for job-seekers, who came to fill an abundance of available jobs, many of which required minimal skills or education, yet paid reasonably good wages. And for years, the youth of the area answered the siren song of a job in the mills so they could buy a car, and left high school before they earned a diploma. But the days when strong backs and weak minds comprise an adequate workforce are gone with the wind.

Our community got the wake-up call about high school drop outs in 1982: we had one of the highest dropout rates in the United States, some years surpassing 50%! But instead of sweeping this shocking information under some of our fine carpet, it was determined that the problem couldn't be fixed until it was acknowledged, and that's what we did. A task force was formed at the Chamber of Commerce to study the problem of our high dropout rates. Thorough research was conducted through many community agencies, including the school systems, Department of Family and Children Services, law enforcement, health department, and United Way agencies, and this resulted in increased community support for and involvement in our efforts.

In 1983 a Stay in School Steering Committee was formed; a public awareness campaign was launched as a cooperative effort between the schools and the business community.

In 1984 a Five Point Proclamation was created. In taking this pledge, companies were asked to demonstrate their support of education by encouraging job applicants under 19 years old to complete their high school education; by hiring high school students on a part-time basis only, and only as long as they maintained good grades; by promoting education among their employees; and recognizing those who complete their GED, and employees' children who completed high school. The Proclamation was eventually signed by 309 companies, and was reissued in '91, asking companies to reaffirm their pledge to support education in these ways.

In 1986 a Speaker's Bureau was created, which coordinates visits by volunteers from business and industry to visit middle school classes and impress upon kids the importance of education at their company. In 1987 we began to reap the fruits of the labors, as dropout rates began to decline.

To provide education opportunities for adult dropouts already in the labor force, businesses were encouraged to offer GED instruction in plant site classes, and over 30 classes are offered each year now.

In 1988 we began to realize that there were many in our community for whom the advice "Stay in School" was just too late. There were significant numbers of teenagers and young adults who needed only a few courses to meet the requirements for a high school diploma based on Carnegie units from an accredited school, rather than the GED. The Dalton-Whitfield Chamber of Commerce, with its already established education committees, provided a core of concerned citizens to assess the extent of the need for such a program. A new Alternative School Committee was formed, and the Dalton-Whitfield Open Campus School opened its doors in August, 1990.

It operates on a 9-week semester, with classes from 3:30 until 10:10 pm. The program provides an education opportunity for students who are currently enrolled in a local high school, but need to pick up an extra class or two in order to graduate on time. Other students are those who lack just a few quarters to meet graduation requirements, but are too old to return to the local high school. The students have named the program Phoenix High, for the bird from ancient mythology that returns to life out of the ashes of death, much like our capital city of Atlanta returned to life after the conflagration of the Civil War. Since its opening in 1990, 345 individuals from 6 counties have earned credit toward graduation, and 100 have earned diplomas.

In 1989 a new education issue became the focus of the Chamber's attention. If our community had years of high dropout rates, where were all those dropouts now? Everybody at the Chamber knew the answer: they're at work in our local businesses and industries. Indeed, the 1980 census indicated that 56% of the adults in Whitfield County had less than a high school education, and the skills gap between the available workforce and the requirements of the workplace was widening with each passing day.

One carpet manufacturer surveyed its hourly employees, and found that only 8% of its current workers had the skills the company projected it would need to remain competitive in the global economy of the year 2000. A local chemical company was conducting a CPR class for its employees as part of its safety training, but realized that many of the class participants were stymied in the CPR training because of their low reading and comprehension skills. A small family-owned company in neighboring Tennessee paid for 5,000 hours of overtime to send his workers to class to learn statistical process control, and afterward found out he'd wasted his money because they couldn't do the basics, such as converting fractions and decimals.

Once again, however, volunteers at the Chamber of Commerce confronted the issue and sought solutions. It was determined that the traditional public adult education opportunities available in the community would not be adequate to rapidly upgrade the basic skills of the adults in our area who needed these services. Besides, if it's technology that is driving the

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demand for a more highly-skilled workforce, why not use technology as a tool in closing the skills gap?

Computer-aided instruction has the potential for helping large numbers of people, around-the-clock. Of course, to undertake a program using computer technology would require much more money than our programs using volunteers had cost to this point. It was determined that a major fund-raising effort would only be successful if contributions could be tax-deductible. So the Education is Essential Foundation was established in 1990 as a 501(c)(3) organization. One of the first pledges of support we received was a $30,000 grant from the Tennessee Valley Authority, along with technical help in selecting software. Additional funds came from the Appalachian Regional Commission, which, added to the contributions from the local community, total over $310,000 to date. We chose software from the Computer Curriculum Corporation, now part of Paramount Workplace Training, to equip our adult learning labs.

The original plan called for the purchase of 25 computer units, to be located at public and private sites in the community. In September, 1990, the first computers were installed at the public adult learning center. In March, 1991, three were placed at the Department of Family and Children Services, for use by welfare clients. That makes our DFCS the only facility in Georgia to have an in-house computer lab for their clients, who line up an hour before the doors are unlocked to be the first on the computers. In addition, 28 units are installed in 10 companies' in-plant learning centers, for a total of 38 computer units serving adults in our community.

Participation in area adult education programs has soared. Students range in age from 19 to 69 and beyond. Beginning readers get their instructions through earphones, and record their answers using a mouse. Correct answers produce gold stars on the screen, and verbal praise like "Good job, George!" Courseware allows students to progress through beginning levels in reading, language and math, on through algebra, science topics, GED preparation, keyboard skills, introduction to computers, computer programming, and English as a second language, which is especially popular among our growing Hispanic community. We've learned that computers have a great potential for significantly improving the literacy levels in our community, and once again, we got the wake-up call a little before everybody else in terms of using computer-aided instruction. The Foundation's project is featured in "Adult Literacy and New Technologies: Tools for a Lifetime", released by the Office of Technology Assessment of the US Congress in July of this year.

The computers are the high-tech aspect of the Education is Essential Foundation's programs, but we do sponsor some low-tech and no-tech activities, too, to pervade the community with the message that education is essential. A Teacher Appreciation Committee organized volunteers to visit 1,350 area teachers. They make a personal visit, distribute a small gift with a message of appreciation, shake the teacher's hand, and lead the students in a round of applause in recognition of all our educators do for our children.

The Literacy Action Committee holds an Annual Children's Book Drive. New and used children's books are collected, sorted, and distributed to 20 human service agencies who deal with families who might not otherwise have children's books in the home. In total, 7,000 books have been distributed to children very excited to have a book of their very own! The committee's hope is that by encouraging an early love of books and learning, these children will have success in school, and avoid the cycle of failure and dropping out.

In September, in recognition of Literacy Month, 47,000 placemats are distributed by 25 area restaurants to encourage reading for children and adults. Helpful Hints fliers are distributed through local PTA's to 9,500 elementary and church kindergarten students, with ideas for parents to encourage their children to read. In addition, 15 companies promoted literacy month with messages on their outdoor advertising signs saying "September is Literacy Month; Read to a Child". A Family Reading Roundup was held at the local mall on a Saturday afternoon, with special guests Garfield and Barney. About 500 children and their parents attended the program, and got giveaway posters and fliers that encouraged reading, staying in school, and adult literacy.

Are these efforts making a difference? You bet! High school dropout rates have declined from 51% to 37% in Whitfield County since 1990! GED rates are up from fewer than 200 in 1990 to 351 in 1992.

These positive results have brought us regional and national attention as a model of what can be accomplished when communities cooperate in striving toward a common goal. We've been featured in a video produced by the US Chamber of Commerce, and in articles in the *Christian Science Monitor*, *Wall Street Journal*, and *Fortune* Magazine. We were nominated as one of President Bush's Points of Light, and have won several state awards for adult literacy.

We're proud of what we've accomplished, but are aware that we have miles to go before we sleep. At the current rate of 350 GED's a year, it would take us 50 years to graduate the 18,000 adults who need a diploma, and that wouldn't include new dropouts, or adults who move into the area from other states or Latin America. Clearly, we need yet another new angle on adult literacy in order to produce the quantum leap in skill levels required for our workforce to remain competitive in the global economy of the 21st century.

And we're already working on it: the Education is Essential Foundation proposes to develop job specific training materials for the carpet industry. Today, training for entry level positions in carpet manufacturing consists of new-hires standing beside old-hands. There's little or no systematic training, or standardized, written instructions.

To develop these materials involves conducting a job task analysis, with expert workers describing to an education consultant exactly what their job entails. The job is analyzed, and broken down into tasks and steps. Next, a literacy task analysis is conducted to identify the exact reading, math, language, communication, and computer skills the job involves. This information will be used to develop job-specific training materials, teaching basic skills in the context of the job the worker is required to perform.

These materials can then be used to screen new hires, and to evaluate applicants for promotions. During our pilot for this project, the plant engineers responsible for preparing the company's ISO 9000 certification were delighted that the training tools we're developing can be used in their ISO application.

The school superintendents are eager for our materials, too. Dalton High School started an apprenticeship program last year, but until industry can explain specifically and systematically what their jobs entail, the schools are struggling to develop a curriculum that will effectively integrate classroom instruction with real on-the-job demands. So the apprenticeship program provides an opportunity for businesses to have more interaction with schools, and press teachers and administrators to plan curriculum and employ instruction methods that will realistically prepare kids for employment in high performance work organizations.

The newly-appointed Chairman of the Tennessee Valley Authority was so impressed with our new project and our past success that he pledged $50,000 toward our project, stating that he was proud to partner with a program that leveraged TVA's first $30,000 pledge into $300,000 for our computer project. In addition, the Georgia Department of Technical and Adult Education has committed $40,000 to our project, and is using EIE as part of a team to develop a blue print for developing similar projects in other communities in the state.

Here's the point: The low literacy and skill levels that are so frighteningly endemic in America today will not be improved dramatically overnight. The cause of this crisis, as well as its solution, is long-term and complex. Based on our experience, the best hope for improvement is for a community to combine human and financial resources of businesses and agencies large and small to develop a collaborative strategy to raise literacy levels. In most communities, the Chamber of Commerce is a natural forum for such a collaboration. Computer-aided instruction has a powerful potential for dramatically and rapidly improving basic skills as well as teaching higher level cognitive skills in learners from pre-school to post-retirement, and should be seriously considered as a learning tool in workplace training programs. Finally, I hear even huge corporations say "We're in the manufacturing business, not the education business. We know we've got a literacy problem, but we don't know what to do about it." Folks from all over come to Dalton to learn about what we're doing. I would encourage this body to seek avenues to identify best practices and model programs for workplace training programs, and then develop ways to increase their visibility so that their light isn't hidden under a bushel.

Robert Woodruff, known around north Georgia and the United States for philanthropies from his Coca-Cola fortune, said there's no limit to what a man can accomplish if he doesn't mind who gets the credit. Dalton and Whitfield County have been fortunate to have a lot of individuals who share Woodruff's opinion, and who are willing to work hard to enhance the quality of life in our community. But it has been our Chamber that has provided a forum where representatives of all community interests can come together on neutral turf to identify the education deficiencies, to develop these exciting programs that are now effectively addressing those problems, and to marshall the human and capital resources needed to build an educated, world class workforce.

For more information:
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GRAEFFE & ASSOCIATES

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Norristown, Pennsylvania 19401

Testimony of
Howard G. Graeffe
Graeffe & Associates

Subcommittee on the Development of Rural Enterprises, Exports, and the Environment of The Committee on Small Business

Submitted to:
The Honorable Bill Sarpalius
Chairman

September 20, 1993
2359 Rayburn Building
Washington D.C.

GRAEFFE & ASSOCIATES

My name is Howard Graeffe. I am a principal in Graeffe & Associates. Our business interests include: a chain of Quick Lubes, Real Estate, Cattle and Telecommunications. I have a B.S. degree from Wagner College and a M.B.A. form Temple University. I have guest lectured at the Temple University School of Continuing Education and the Wharton School, evening school division of the University of Pennsylvania. In the Lehigh Valley I serve on: the Board of Directors of the Lehigh Valley 2000: A Business- Education Partnership; the School Board of Southern Lehigh as vice president; the Pennsylvania Community Learning and Information Network, Inc. (PA. CLIN) as president; and the Southern Lehigh Business Organization. At the state level I am on the Distance Learning Task Force and Chair one of the subcommittees and serve on the Pennsylvania Department of Education Distance Learning Committee. As a business man and private citizen I am concerned with education within my state, Pennsylvania, and the nation. I appreciate the opportunity to provide testimony for this hearing today.

The American educational system does not adequately prepare students for today's workforce. Many of the pedagoies used in the classroom as well as course offerings have not kept pace with the demands of the workplace. Some have argued that the approaches we take to education are rooted in the 19th century that were developed to assist in the industrialization of Europe and the United States. Our education system needs to transition to enable our students to perform in the post industrial high tech information economy of the 21st century. The difficulty is there are no clear road maps or sign posts to point to which could facilitate this transition. This transition or change to meet the demands of our economy brings with it a high level of anxiety from all sectors involved in the educational process. This is manifested at the school board level by a high turn over of directors and representation by special interests on those boards, at the state level with some states forced to take draconian measures on financing our schools and at the federal level with the difficulties of the enactment of world class standards and goals.

As a Governor and President, President Clinton has demonstrated his leadership and commitment to brining about meaningful educational reform, by recommending the establishment of Goals 2000 and setting standards for our educational system. We should support the President on his initiatives. The educational bureaucracy would be well advised to follow Vice President Gore's lead in applying the quality process to our bureaucracy to enhance productivity and the service schools should be providing to their communities. We should encourage all sectors in our communities to come together and understand the issues surrounding education so that we begin speaking a common language on the issues. More importantly, all sectors in our communities must accept responsibility for the education delivered in our schools. School districts, small and large business, local, state and federal governments need to work together to provide the resources and the leadership necessary to bringing about changes to the educational process. We need to encourage and support programs that go outside of our traditional student lecture format. We should view our schools as resources not only for the traditional school student but for the entire community. Examples of some new approaches would include: New York City Board of Education is delivering Physics to their students from a professor at MIT: Dr. Bernard Solomon, Philadelphia School District, has produced and delivered programs from the Franklin Institute to the Washington D.C. School District and the Dallas, Texas School District via satellite on an interactive and real time format; in addition, Dr. Solomon has produced programs in science and other subjects for non English speaking students; the Community Learning and Information Network is being developed to deliver the best educational resources for our students and the small business entity regardless of geographic location. We need to foster the notion that education is a life long process.

Our vocational educational system historically has been used as a placement system for non traditional or non college bound students. In some instances it has been used to remove disruptive students from their traditional classes. Although some strides have been made to destigmatize vo-tec education there is much that needs to be done. Many students have split schedules between vo-tec school and their home school. This leads to a lack of continuity in their education and a question as to where the student fits. Many of these students do not understand the importance of being able to communicate effectively or perform the simplest of mathematics computations. I spoke to a manager of a plumbing supply company. He conducts seminars for his contractors on new materials and applications. Over 60% of the time spent is reviewing how to determine markups on the contractors work product. I spend time with my managers and employees on basic math calculations. Many of our employees did not understand

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the importance of this basic skill while in school and therefore dismissed the subject as unimportant. Our vo-tec schools need to stress the importance of these very basic skills. These skills should be taught as applications and should demonstrate how they are integrally involved with any job they might have. Our students do not understand how these skills are connected to their well being and productivity as employees.

Our schools need to reinforce that education is a life long process. There should be a higher level of continuity between schools and employers of their students. Schools should do a better job of working with employers and employers must take the lead in stressing the importance of education to young employees. Employees that need remediation help should be encouraged to seek it out. Employers should communicate and work with their schools to make available the remediation help. By broadening the dialogue between schools and business, reinforcing that education is a life long process and working with our young employees before and after graduation, the transition to the workforce would improve. This dialogue and continuity would provide a seamless transition to the workforce and reinforce to our students the importance of education. The notion that education and improvement of our skills does not stop and start but is part of a continuum is paramount.

There are many costs associated with a poorly educated work force. They include: the cost to train and remediate our employees; high turnover of employees; the ability to sustain productivity gains are deminished; and margins or profitability on our services or products are strained. The time we spend on basic concepts for our employees is time that takes away from specialized training for our business. Employees unable to perform basic math or communicate effectively with our customers, costs us in the form of lost sales or profits. The implementation of new systems takes longer. Employees with low level skills change jobs frequently, which force us as employers to spend the resources necessary to continually train new employees rather than improving our services or products. I believe these costs can and do impact the survival of many small businesses.

The primary challenges facing small businesses as they relate to training are making the commitment of time and resources necessary to having a highly productive workforce. We need to reinforce the work being done in our schools. Take the responsibility of working with our schools to smooth the transition between the work place and school. Instill in our young employees that education is a life long process. Encourage our current employees to upgrade their skills. Work with our educational institutions to insist on excellence from their students and our employees. We must look to leverage our resources, so that remediation and upgrading of our employee skills are affordable and available. I believe that education and training is the platform on which our economic prosperity depends.

UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON SMALL BUSINESS
SUBCOMMITTEE ON
RURAL ENTERPRISES, EXPORTS, AND THE ENVIRONMENT

TESTIMONY PRESENTED BY
F. TIM WITSMAN
PRESIDENT, WICHITA (KANSAS) CHAMBER OF COMMERCE
SEPTEMBER 21, 1993

Mr. Chairman, Honorable members of the committee, I deeply appreciate the opportunity to appear before you on the needs of small business from the educational system. Over the past six years we have devoted more of our economic development resources to improving our education and training systems in Wichita than to any other aspect of economic development. I will limit my remarks to your five questions.

Question 1: Does the American educational system adequately prepare students for today's work force?

I am inclined to agree with Al Shanker's statement that perhaps only 5% of our high school graduates are prepared at the level of a European college entrant. Perhaps another 15-20% are prepared at an American university level. The vast majority of the remaining graduates are not prepared at any functional level. At this point the high school diploma is without meaning.

Several years ago we noticed that companies were showing preference for people with GEDs over high school graduates. The reason? The GED requires passage of a tenth grade competency test and is proof of effort and commitment. In the past two years we have learned that many large companies will not hire high school graduates. They hire either persons who have proven themselves with smaller employers or who have gone on to post-secondary training.

Before we lay all of the blame for these conditions upon the schools, we must recognize that much of the problem is the result of social and economic factors and the diffusion of educational focus through a multiplicity of mandates, both federal and state. Today in the urban areas of our country we face the imminent danger of the complete collapse of the public education system. If the attendees are all poor and the taxpayers are not, it is very difficult to maintain support for public education.

Equally as dangerous is the reverse image held by recent graduates and their parents, and the perceptions of employers and higher education. A 1992 Harris poll revealed that roughly two thirds of recent graduates and their parents thought they were well prepared. The same percentage of employers and college teachers judged them to be ill-prepared. We have met the enemy but do not recognize the face in the mirror.

Suggestions

1) To achieve success in any endeavor you need high expectations, standards, objectives. Our criteria should be comparisons to the standards of our industrialized competitor nations. It would be useful to have national standards but that does not mean that they should be government created or imposed.

2) We should strip away the incredible list of demands we place on the schools and permit them to focus on the most important knowledge and skill areas.

3) We should utilize the SCANS approach in developing curriculum and standards. I have enclosed copies of the five workplace competencies and three foundation skills. Our businesses are excited by an educational approach that brings a common language to the employer and the schools. In Fort Worth they have taken the next step by performing job analyses and defining the competencies and levels of competency needed for hundreds of jobs. I have also included a SCANS style resume

which employers would use in contrast to a transcript with no hint as to the quality of the courses or grades.

4) We need to introduce to our students at an early age, pride in technical education and training and the careers which result from this training. The building of pride should not be limited to students, but should include parents, teachers, and counselors, as well as the general public.

5) We need to change teacher training to include more content as do all of our competitors.

6) We need to bring some order to our chaotic non-system of post-secondary education and training and its link to K-12. In Sedgwick County, our business/education partnership has brought together superintendents and post-secondary providers to begin coordinating efforts to meet the employers' needs which are the needs of our students as well.

7) We need greater emphasis on early childhood education.

8) We cannot solve our problem by limiting efforts to the schools. We need some things Washington cannot provide. We must organize people to take back their neighborhoods and the streets from gangs, drug dealers and other criminals.

9) We need state and federal policies which favor and recognize the inherent value of families.

Question 2: How would you characterize America's vocational educational system? Does it adequately prepare America's students?

1) With some exceptions our system is plagued with dated equipment, obsolete facilities, a curriculum which is at least partially irrelevant and a poor image.

2) We have a poor transition and connection between high school and vocational training.

3) Career opportunities are not well articulated and are little understood by most teachers.

Suggestions

1) Funding priorities should be shifted to upgrade vocational education.

2) Exceptional programs should be examined such as Fox Valley Tech in Appleton, Wisconsin.

3) There should be local, state and national efforts to market the value of vocational training to improve its status in the public's eye.

4) There should be greater use of employers in setting direction and developing program. This means more than just input. Local, high-level business education partnerships (not adopt-a-school) at both the K-12 and post-secondary level can address this need if they are properly empowered.

5) Vocational education is not about "learning a trade." Businesses do not expect high school graduates to be industrial robots; nor do they expect graduates to have specific trade skills.

6) The certificates of mastery proposed in High Skills or Low Wages are an excellent idea and can be meshed with the SCANS competency guidelines.

Question 3: What can be done to improve the U.S. school to work transition system?

1) Introduce children at a much earlier age to the world of work. Ft. Worth runs a program which gives twelve-year-olds roughly a two week exposure with an employer to see the work and the rewards.

2) Use businesses to do mock interviews with students early in their high school careers so that they can see what is expected of them.

3) Encourage apprenticeships. Our kids are terribly underserved as compared to other industrialized countries (see attachment comparing U.S. and

Germany). A National Alliance of Business survey (results attached) shows strong interest among both principals and employers. Our own machine shops found it necessary to develop a machinists apprentice program which we initially funded, and which is now self-supporting. Apprenticeships, especially at the high school level, are a long-term investment. A measurable return on that investment may not be realized for 3-5 years. Small employers are often so overburdened with costly regulations and taxes that they virtually cannot consider this investment. Special incentives may have to be established to cause these employers to take the risk.

4) Encourage programs such as EQUYP (a model of which is attached).

5) Push for more votech- college cooperation and articulation and clearly communicate paths to alternative degrees and and careers.

6) Make teachers more aware of the needs of employers through programs such as our Teacher/Business Network. This program provides paid summer work experiences for teachers designed to increase the understanding of both the employer and the teacher.

Question 4: Small businesses hire 80 percent of the students out of high school. What is the economic cost to small businesses of a poorly or inadequately educated work force?

1) I have no scientific answer, but if memory serves, a GM vice-president once told me that they spent two billion dollars retraining when GM went to full automation. Today our companies tell us they spend about one percent of payroll on training and are headed toward two percent. That is still significantly less than the European average.

2) We do hear constant complaints about the need to "retrain" people on skills and proficiencies which should be obtained through high school.

3) The impact is greater on small business because their pay levels cause them to obtain the more marginally skilled workers than the larger companies.

Question 5: As you look into the future of American business, what are the challenges facing small businesses in the training of new employees and upgrading the skills of currently employed workers?

1) The most frequent complaint on our employment and training surveys is the lack of basic skills and motivation of job applicants. This comment comes from an area known for its good work ethic and high skills.

2) While we consider diversity an asset, it does provide new challenges, particularly for small businesses who do not have access to diversity training common in larger organizations.

3) It is difficult for small employers to free up people for training. Unlike the old industrial model, people are not interchangeable. Each one is critical to the company's operation.

4) Mandates and regulations both drain resources and deflect the owner from staff improvement. When your medical costs and work comp costs are skyrocketing, funds for training suffer. When you are striving, without the support of staff experts, to deal with OSHA requirements, mandated leave, and the Americans With Disabilities Act, you have less time to devote to employee development.

5) Child labor laws and certain restrictions on defense contractors limit the ability of employers to provide apprenticeships or other work experiences to students.

6) The minimum wage serves as a barrier to broadening student access to early work experiences. This is not the case in Germany and other industrialized countries. They recognize the value of the experience and the students' lack of marketable skills.

In summary, you are focused on one of the most important challenges of our time. The future of our children, indeed, the economic future of the nation, hinges on our ability to revamp our system through a cooperative public-private partnership. In a country as diverse as ours, that can best be achieved by national and state direction with local implementation.

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EXHIBIT 1

WORKPLACE KNOW-HOW

The know-how identified by SCANS is made up of five workplace competencies and a three-part foundation of skills and personal qualities that are needed for solid job performance. These are:

WORKPLACE COMPETENCIES — Effective workers can productively use:

- **Resources**—They know how to allocate time, money, materials, space, and staff.
- **Interpersonal skills**—They can work on teams, teach others, serve customers, lead, negotiate, and work well with people from culturally diverse backgrounds.
- **Information**—They can acquire and evaluate data, organize and maintain files, interpret and communicate, and use computers to process information.
- **Systems**—They understand social, organizational, and technological systems; they can monitor and correct performance; and they can design or improve systems.
- **Technology**—They can select equipment and tools, apply technology to specific tasks, and maintain and troubleshoot equipment.

FOUNDATION SKILLS — Competent workers in the high-performance workplace need:

- **Basic Skills**—reading, writing, arithmetic and mathematics, speaking, and listening.
- **Thinking Skills**—the ability to learn, to reason, to think creatively, to make decisions, and to solve problems.
- **Personal Qualities**—individual responsibility, self-esteem and self-management, sociability, and integrity.

These developments have barely been reflected in how we prepare young people for work or in how many of our workplaces are organized. Schools need to do a better job and so do employers. Students and workers must work smarter. Unless they do, neither our schools, our students, nor our businesses can prosper.

SCANS research verifies that what we call ***workplace know-how*** defines effective job performance today. This know-how has two elements: ***competencies*** and a ***foundation***. This report identifies five competencies (See insert below.) and a three-part foundation of skills and personal qualities (See pages 4 and 5.) that lie at the heart of job-performance. These eight requirements are essential preparation for all students, both those going directly to work and those planning further education. Thus, the competencies and the foun-

FIVE COMPETENCIES

Resources: Identifies, organizes, plans, and allocates resources

- A. *Time*—Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules
- B. *Money*—Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives
- C. *Material and Facilities*—Acquires, stores, allocates, and uses materials or space efficiently
- D. *Human Resources*—Assesses skills and distributes work accordingly, evaluates performance and provides feedback

Interpersonal: Works with others

- A. *Participates as Member of a Team*—contributes to group effort
- B. *Teaches Others New Skills*
- C. *Serves Clients/Customers*—works to satisfy customers' expectations
- D. *Exercises Leadership*—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies
- E. *Negotiates*—works toward agreements involving exchange of resources, resolves divergent interests
- F. *Works with Diversity*—works well with men and women from diverse backgrounds

Information: Acquires and uses information

- A. *Acquires and Evaluates Information*
- B. *Organizes and Maintains Information*
- C. *Interprets and Communicates Information*
- D. *Uses Computers to Process Information*

Systems: Understands complex inter-relationships

- A. *Understands Systems*—knows how social, organizational, and technological systems work and operates effectively with them
- B. *Monitors and Corrects Performance*—distinguishes trends, predicts impacts on system operations, diagnoses systems performance and corrects malfunctions
- C. *Improves or Designs Systems*—suggests modifications to existing systems and develops new or alternative systems to improve performance

Technology: Works with a variety of technologies

- A. *Selects Technology*—chooses procedures, tools or equipment including computers and related technologies
- B. *Applies Technology to Task*—Understands overall intent and proper procedures for setup and operation of equipment
- C. *Maintains and Troubleshoots Equipment*—Prevents, identifies, or solves problems with equipment, including computers and other technologies

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dation should be taught and understood in an integrated fashion that reflects the workplace *contexts* in which they are applied.

We believe, after examining the findings of cognitive science, that the most effective way of learning skills is "in context," placing learning objectives within a real environment rather than insisting that students first learn in the abstract what they will be expected to apply.

The five SCANS competencies span the chasm between the worlds of the school and the workplace. Because they are needed in workplaces dedicated to excellence, they are the hallmark of today's expert worker. And they lie behind every product and service offered on today's market.

The competencies differ from a person's technical knowledge. For example, both accountants and engineers manage resources, information,

A THREE-PART FOUNDATION

Basic Skills: Reads, writes, performs arithmetic and mathematical operations, listens and speaks

A. *Reading*—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules

B. *Writing*—communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts

C. *Arithmetic/Mathematics*—performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques

D. *Listening*—receives, attends to, interprets, and responds to verbal messages and other cues

E. *Speaking*—organizes ideas and communicates orally

Thinking Skills: Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn, and reasons

A. *Creative Thinking*—generates new ideas

B. *Decision Making*—specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative

C. *Problem Solving*—recognizes problems and devises and implements plan of action

D. *Seeing Things in the Mind's Eye*—organizes, and processes symbols, pictures, graphs, objects, and other information

E. *Knowing How to Learn*—uses efficient learning techniques to acquire and apply new knowledge and skills

F. *Reasoning*—discovers a rule or principle underlying the relationship between two or more objects and applies it when solving a problem

Personal Qualities: Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty

A. *Responsibility*—exerts a high level of effort and perseveres towards goal attainment

B. *Self-Esteem*—believes in own self worth and maintains a positive view of self

C. *Sociability*—demonstrates understanding, friendliness, adaptability, empathy, and politeness in group settings

D. *Self-Management*—assesses self accurately, sets personal goals, monitors progress, and exhibits self-control

E. *Integrity/Honesty*—chooses ethical courses of action

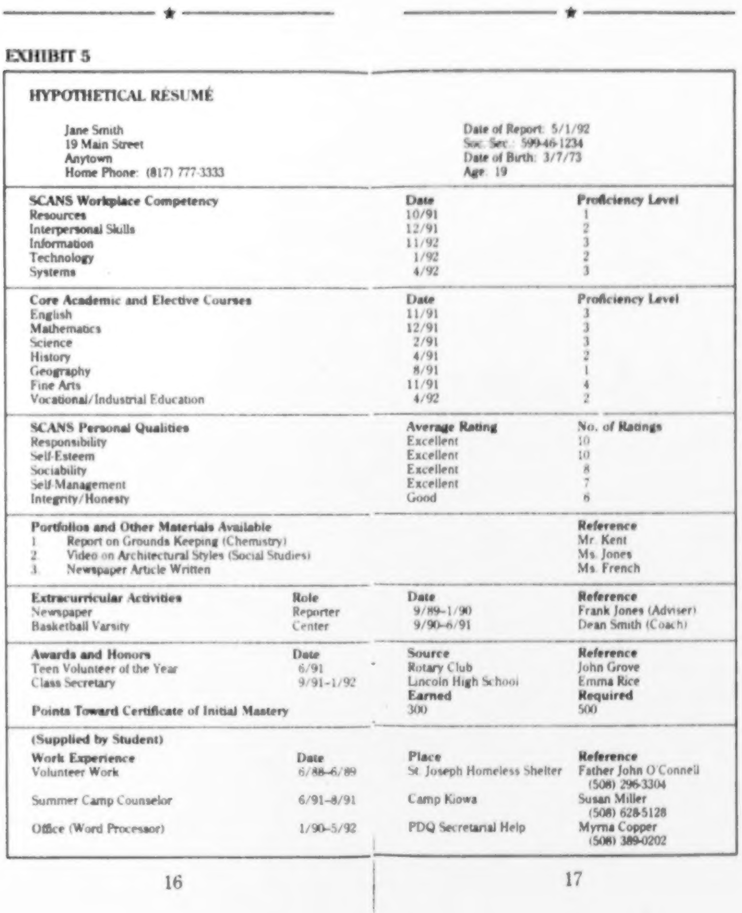

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EXHIBIT 5

HYPOTHETICAL RÉSUMÉ

Jane Smith
19 Main Street
Anytown
Home Phone: (817) 777-3333

Date of Report: 5/1/92
Soc. Sec.: 599-46-1234
Date of Birth: 3/7/73
Age: 19

SCANS Workplace Competency	**Date**	**Proficiency Level**
Resources	10/91	1
Interpersonal Skills	12/91	2
Information	11/92	3
Technology	1/92	2
Systems	4/92	3

Core Academic and Elective Courses	**Date**	**Proficiency Level**
English	11/91	3
Mathematics	12/91	3
Science	2/91	3
History	4/91	2
Geography	8/91	1
Fine Arts	11/91	4
Vocational/Industrial Education	4/92	2

SCANS Personal Qualities	**Average Rating**	**No. of Ratings**
Responsibility	Excellent	10
Self-Esteem	Excellent	10
Sociability	Excellent	8
Self-Management	Excellent	7
Integrity/Honesty	Good	6

Portfolios and Other Materials Available	**Reference**
1. Report on Grounds Keeping (Chemistry)	Mr. Kent
2. Video on Architectural Styles (Social Studies)	Ms. Jones
3. Newspaper Article Written	Ms. French

Extracurricular Activities	**Role**	**Date**	**Reference**
Newspaper	Reporter	9/89–1/90	Frank Jones (Adviser)
Basketball Varsity	Center	9/90–6/91	Dean Smith (Coach)

Awards and Honors	**Date**	**Source**	**Reference**
Teen Volunteer of the Year	6/91	Rotary Club	John Grove
Class Secretary	9/91–1/92	Lincoln High School	Emma Rice
		Earned	**Required**
Points Toward Certificate of Initial Mastery		300	500

(Supplied by Student)

Work Experience	**Date**	**Place**	**Reference**
Volunteer Work	6/88–6/89	St. Joseph Homeless Shelter	Father John O'Connell (508) 296-3304
Summer Camp Counselor	6/91–8/91	Camp Kiowa	Susan Miller (508) 628-5128
Office (Word Processor)	1/90–5/92	PDQ Secretarial Help	Myrna Copper (508) 389-0202

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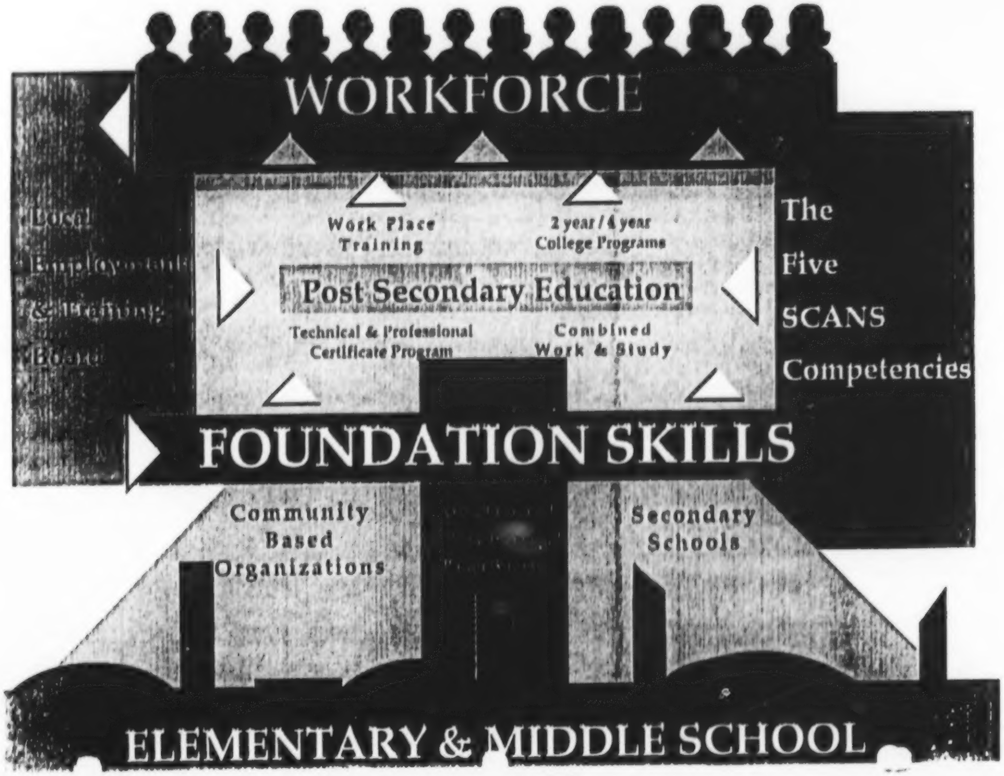
Selected Questions From
National Alliance of Business
PRINCIPALS
YOUTH APPRENTICESHIP SURVEY RESULTS

Total number of questionaires returned was 1072

		Yes	No	No Ans
1	Do you believe the United States should have a better school-to-work transition system?	1041 98%	19 2%	6 1%
1A	If "yes", do you believe employers should be involved with the system?	1037 100%	5 0%	24 2%
2	Would you be willing to spend time and money working with a local business to help students prepare for careers?	838 86%	137 14%	94 9%
2A	If "no", would you be interested in a Youth Apprenticeship program if the government offered incentives for participation, such as professional development for teachers?	374 94%	25 6%	669 62%
3	Would you be willing to alter your school's curriculum to include courses that are relative to particular careers?	965 95%	51 5%	52 5%


WORKFORCE
Local Employment & Training Board
Work Place Training
2 year / 4 year College Programs
Post Secondary Education
Technical & Professional Certificate Program
Combined Work & Study
The Five SCANS Competencies
FOUNDATION SKILLS
Community Based Organizations
Secondary Schools
ELEMENTARY & MIDDLE SCHOOL

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APPRENTICESHIP COMPARISON:
Germany and the United States

GERMANY	UNITED STATES
SCOPE: All major Industries; 377 Occupations	SCOPE: Mainly in Construction and Manufacturing Industries; 819 Occupations
TERM: 3 - 3.5 Years	TERM: Average: 4 Years
CLASSROOM INSTRUCTION: Avg. 1.5 Days/Week	CLASSROOM INSTRUCTION: 4 Hours/Week
AVERAGE AGE: 19-20 Years	AVERAGE AGE: 26.4 Years
WAGES: Standardized by Occupation (Sub-minimum by U.S. Standards)	WAGES: 50-95% of Journey-Level Wages
TRAINING: Foundation of Skills Needed in Industry	TRAINING: Trade Specific
PERCENT OF YOUTH SERVED: More than 70%	PERCENT OF YOUTH SERVED: Less than 2%

Selected Questions From National Alliance of Business EMPLOYERS YOUTH APPRENTICESHIP SURVEY RESULTS

Total number of questionaires returned was 526

1 Do you believe the United States should have a better system for preparing young people for work?

Yes	No	No Ans
510	9	5
98%	2%	1%

1A If "yes", do you believe employers should be involved with the system?

Yes	No	No Ans
483	19	22
96%	4%	4%

2 Would you be willing to spend time and money working with a school and part-time workers in order to have better prepared workers?

Yes	No	No Ans
366	128	29
74%	26%	6%

2A If "no", would you be interested in a Youth Apprenticeship program if the government offered incentives for participation, such as subsidies or tax credits?

Yes	No	No Ans
169	43	312
80%	20%	59%

3 How would you describe your company? (circle one)

	manufacturing	service	other	no answer
Count	242	224	57	1
Percent	46%	43%	11%	0%

4 How many employees do you have? (circle one)

	less than 50	50-150	150-300	300-500	over 500	no answer
Count	158	186	85	31	62	1
Percent	30%	36%	16%	6%	12%	0%

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NATIONAL STRATEGIC PARTNERSHIP

U.S. CHAMBER OF COMMERCE
U.S. DEPARTMENT OF AGRICULTURE
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Innovative programs offering exciting new approaches to:

- ☐ **JOB CREATION**
- ☐ **JOB ENRICHMENT**
- ☐ **QUALITY MANAGEMENT**
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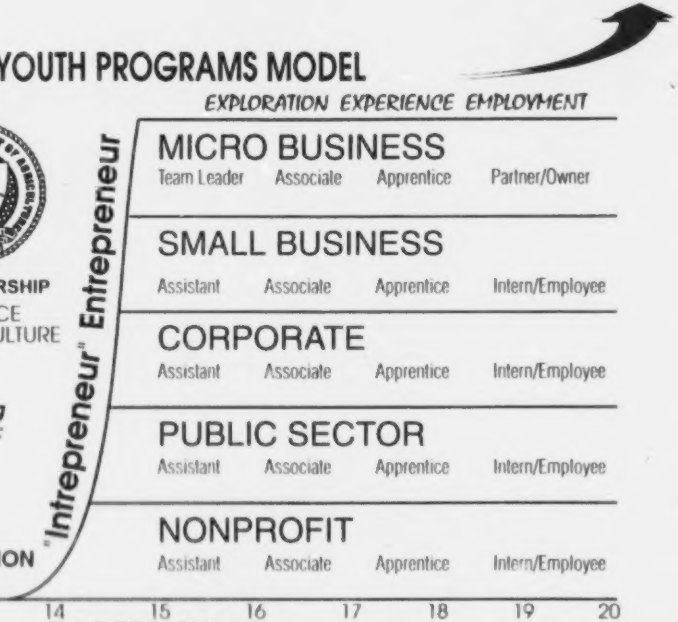

EXPLORATION EXPERIENCE EMPLOYMENT

"Intrepreneur" Entrepreneur

MICRO BUSINESS
Team Leader Associate Apprentice Partner/Owner

SMALL BUSINESS
Assistant Associate Apprentice Intern/Employee

CORPORATE
Assistant Associate Apprentice Intern/Employee

PUBLIC SECTOR
Assistant Associate Apprentice Intern/Employee

NONPROFIT
Assistant Associate Apprentice Intern/Employee

Age 7 12 14 15 16 17 18 19 20

LIFE SKILLS
Understanding Self
Interpersonal Relationships
Problem Solving & Decision Making
Information Management
Managing Resources
Working with Others

CAREER SKILLS
Basic Business Processes & Principles
Quality Management & Process Improvement
Quality Performance & Leadership for Change
Basic Economic Analysis & Planning
Entrepreneurial & "Intrepreneurial" Techniques
Strategic Planning/Leading to Excellence

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